CURRICULUM VITAE – JUNE 2026

CONTACT INFORMATION

Dorothy Foehr Huck and J. Lloyd Huck Endowed Chair in Microbiome Sciences, Director of the Microbiome Center, Departments of Biology and Entomology, Pennsylvania State University, University Park, PA, https://bordensteinlab.com/, Socials: @Symbionticism, email: s.bordenstein@psu.edu

DEGREES EARNED

2002	*Ph.D.* in Evolutionary Genetics, Department of Biology, The University of Rochester. Dissertation topic: Endosymbiosis and speciation
1999	*M.S.* Biology, Department of Biology, University of Rochester
1997	*B.S.* Biology: Ecology and Evolutionary Biology, cum laude and with distinction in research, University of Rochester

EMPLOYMENT HISTORY

2022-Present	Dorothy Foehr Huck and J. Lloyd Huck Endowed Chair in Microbiome Sciences, Penn State University, University Park, PA
2022-Present	Director of the Microbiome Center, Huck Institutes of the Life Sciences, Penn State University, University Park, PA
2022-Present	Professor Biology and Entomology, Penn State University, University Park, PA
2022-Present	Faculty Affiliate, Center for Human Evolution and Diversity
2022-Present	Member, Cancer Institute, Penn State University, College of Medicine, Hershey, PA
2020-Present	Centennial Endowed Chair in Biological Sciences, Vanderbilt University, Nashville, TN
2019-2022	Professor, Department of Biological Sciences, Vanderbilt University, Nashville, TN
2018-2022	Member, Vanderbilt Institute of Chemical Biology, Vanderbilt University, Nashville, TN
2017-2022	Director, Vanderbilt Microbiome Innovation Center, Vanderbilt University, Nashville, TN

2017-2022	Associate Director, Vanderbilt Institute for Infection, Immunology and Inflammation, Vanderbilt University, Nashville, TN
2017-2022	Member, Diabetes Research and Training Center, Vanderbilt University Medical Center, Nashville, TN
2015-2022	Member, Vanderbilt Genetics Institute, Vanderbilt University Medical Center, Nashville, TN
2013-2019	Associate Professor, Departments of Biological Sciences and Pathology, Microbiology, and Immunology, Vanderbilt
2013-2022	Member, Digestive Disease Research Center and Epithelial Integrity Group, Vanderbilt University Medical Ctr, Nashville, TN
	Member, Vanderbilt-Ingram Cancer Center, GI Program, Vanderbilt University Medical Center, Nashville, TN
2011-2013	Secondary Appointment, Assistant Professor, Department of Pathology, Microbiology, and Immunology, Vanderbilt University Medical Ctr, Nashville, TN
2008-2013	Assistant Professor, Department of Biological Sciences, Vanderbilt University, Nashville, TN
2008-2013	Adjunct appointment at Josephine Bay Paul Center for Comparative Molecular Biology and Evolution, The Marine Biological Laboratory, Woods Hole, MA
2005-2008	Adjunct appointment as Assistant Professor, Department of Ecology and Evol. Biology Brown University, Providence, RI
2005-2008	Assistant Scientist, Josephine Bay Paul Center for Comparative Molecular Biology and Evolution, The Marine Biological Laboratory, Woods Hole, MA
2003-2005	Assistant Research Scientist, Josephine Bay Paul Center for Comparative Molecular Biology and Evolution, The Marine Biological Laboratory, Woods Hole, MA
2002-2003	Postdoctoral Fellow of the National Research Council / NASA Astrobiology Associateship Program, The Marine Biological Laboratory, Woods Hole, MA

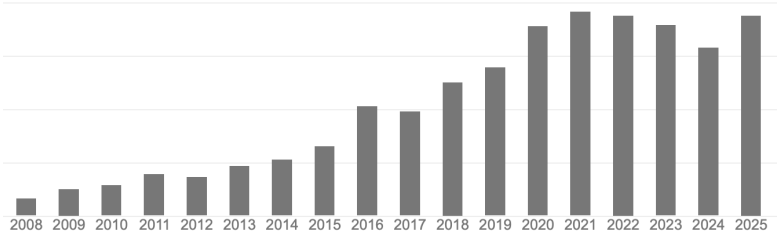
HONORS AND AWARDS

2025	Elected Fellow of the American Association for the Advancement of Science (AAAS)

2024	WH Pierce Global Impact in Microbiology Prize to the One Health Microbiome Center, Applied Microbiology International
2024	High Impact Research Publication Award in One Health, College of Agricultural Sciences, Penn State Univ., for article in *Science*
2024 (since 2020)	Stanford/Elsevier Top 2% of Highly Cited Scientists, World Rank
2023, 2024	Clarivate Highly Cited Researcher in the field of Cross-Field
2022	Dorothy Foehr Huck and J. Lloyd Huck Endowed Chair in Microbiome Sciences, Pennsylvania State University
2021	Vanderbilt Ingram Cancer Center Transformative Cancer Research Funding Award
2021	Fellow, American Academy of Microbiology
2020	Trans-Institutional Programs Award, Vanderbilt Microbial Alliance for Precision, Founding Co-Director, Vanderbilt University
2020	Vanderbilt Institute of Chemical Biology Highly Cited Articles Award
2020	Centennial Endowed Chair in Biological Sciences, Vanderbilt
2020	Elizabeth W. Jones Award for Excellence in Education, Genetics Society of America
2018	Chancellor Faculty Fellow Award, Vanderbilt University
2018	Trans-Institutional Programs Award, The Initiative for Personalized Microbial Discovery and Innovation, Faculty Participant, Vanderbilt University
2018	Trans-Institutional Programs Award, Vanderbilt Initiative for the Study of Antimicrobial Resistance Drivers, Faculty Participant, Vanderbilt University
2017	Trans-Institutional Programs Award, Vanderbilt Microbiome Initiative, Founding Director, Vanderbilt University
2017	Vanderbilt Office for Equity, Diversity and Inclusion Research Award on the human microbiome and ethnicity
2015	Award for Excellence in Research, Department of Biological Sciences, Vanderbilt University
2014	Jeffrey Nordhaus Award for Excellence in Undergraduate Teaching, Vanderbilt University
2014	Chancellor's Award for Research, Vanderbilt University
2013	Research ranked as top science story in *Science News*
2013	Howard Hughes Medical Institute Professors' Competition, Finalist
2012	Best Teacher/Mentor Award, Department of Biological Sciences, Vanderbilt University
2012	Faculty Award for Excellence in Research, Department of Biological Sciences, Vanderbilt University
2010	Distinguished lecturer, Case Western Research University, Cellular and Molecular Biology Training Program
2010	Award recipient, new NSF Program: Dimensions of Biodiversity
2007	Founding Director, Howard Hughes Medical Institute Precollege Science Education Award
2004	Neal W. Cornell Endowed Research Fund, MBL

2002	National Research Council / NASA Astrobiology Institute Postdoctoral Fellowship
2001	Ernst Caspari Fellow, Department of Biology, University of Rochester, one annual recipient
1999	Edward Peck Curtis Award for Excellence in Teaching by a Graduate Student – one of five university-wide annual recipients
1999	Department of Biology Graduate Student Teaching Award, University of Rochester, one of two annual recipients
1997	Senior Research Scholar in Biology, University of Rochester
1995	de Kiewiet Research Fellow in Biology and Medicine, University of Rochester

RESEARCH



HIGHLIGHTS AS OF 6/2026
- H-index: 65, Google Scholar
- 20,307 citations
- 139 peer-reviewed publications
- 10 non-refereed commentaries
- 3 other publications
- 3 patents granted
- 3 patents pending
- 19 authorships by undergrads

Articles in refereed journals

1. Bordenstein, S.R. and J.H. Werren. (1998) Effects of A and B *Wolbachia* and host genotype on interspecies cytoplasmic incompatibility in *Nasonia*. **Genetics** 148: 1833-1844. Contribution - 80%. SRB conceived, performed, analyzed, and published the research with graduate advisor JHW.

2. Bordenstein, S.R. and J.H. Werren. (2000) Do *Wolbachia* influence fecundity in *Nasonia vitripennis*? **Heredity** 84:54-62. Contribution - 80%. SRB conceived, performed, analyzed, and published the research with graduate advisor JHW.

3. Bordenstein, S.R., M.D. Drapeau, and J.H. Werren. (2000) Intraspecific variation in sexual isolation in the jewel wasp *Nasonia*. **Evolution** 54: 567-573. Contribution - 60%. SRB conceived, performed, analyzed, and published the research with undergraduate colleague MDD and graduate advisor JHW.

4. Bordenstein, S.R., F.P. O'Hara, and J.H. Werren. (2001) *Wolbachia*-induced incompatibility precedes other hybrid incompatibilities in *Nasonia*. **Nature** 409: 707-710. Contribution - 70%. SRB designed, performed, analyzed, and published the research along with graduate student FPO and graduate advisor JHW.
    - Featured in *Nature* News and Views, *Scientific American*, *Science News Online*, etc.

5. Bordenstein, S.R. and M.D. Drapeau. (2001) Genotype-by-environment interaction and the Dobzhansky-Muller model of postzygotic isolation. **Journal of Evolutionary**

Biology 14: 490-501. Contribution - 50%. SRB designed, performed, and published the research along with undergraduate colleague MDD.

6. Wernegreen, J.J., P.H. Degnan, A.B. Lazarus, C. Palacios, and S.R. Bordenstein. (2003) Genome evolution in an insect cell: Distinct features of an ant-bacterial partnership. **Biological Bulletin** 204: 221-231. Contribution - 10%. SRB helped write and publish the research as a postdoctoral associate with the first author and postdoc advisor JJW.

7. Bordenstein, S.R., J.J. Uy[Ψ], and J.H. Werren. (2003) Host genotype determines cytoplasmic incompatibility type in the haplodiploid genus *Nasonia*. **Genetics** 163: 223-233. Contribution - 70%. SRB designed, performed, and published the research along with JJU and graduate advisor JHW.
    - [Ψ]University of Rochester undergraduate

8. Bordenstein, S.R., D.H.A. Fitch, and J.H. Werren. (2003) Absence of *Wolbachia* in nonfilariid nematodes. **Journal of Nematology** 35: 266-270. Contribution - 90%. SRB designed, performed, and published the research. DHA provided samples. All authors wrote the manuscript.

9. Bordenstein, S.R. and J.J. Wernegreen. (2004) Bacteriophage flux in endosymbionts (*Wolbachia*): Infection frequency, lateral transfer, and recombination rates. **Molecular Biology and Evolution** 21: 1981-1991. Contribution - 90%. SRB designed, performed, and published the research. Both authors wrote the paper.
    - Featured in F1000

10. Reznikoff, W.S., S.R. Bordenstein and J. Apodaca. (2004) Comparative sequence analysis of IS50/Tn5 transposase. **Journal of Bacteriology** 186: 8240-8247. Contribution - 20%. SRB helped design the project, analyze phylogenies, and write the paper.

11. Bordenstein, S.R. and W.S. Reznikoff. (2005) Mobile DNA in obligate intracellular bacteria. **Nature Reviews Microbiology** 3: 688-699. Contribution – 80%. SRB conceived the review and analyzed the literature and data. SRB and WSR wrote the paper.

12. Baldo, L., S.R. Bordenstein, J.J. Wernegreen and J.H. Werren. (2005) Widespread recombination throughout *Wolbachia* genomes. **Molecular Biology and Evolution** 23: 437-449. Contribution - 20% of the effort is from the Bordenstein lab; SRB performed phylogenetic analyses and helped write the paper.
    - Featured in F1000

13. Bordenstein, S.R. and R.B. Rosengaus. (2005) Discovery of a novel *Wolbachia* supergroup in Isoptera. **Current Microbiology** 51: 393-398. Contribution - 95%. SRB conceived and performed the research, analyzed data, and wrote the paper with RBR.

14. Casiraghi M., S.R. Bordenstein, L. Baldo, N. Lo, T. Beninati, J.J. Wernegreen, J.H. Werren and C. Bandi. (2005) Phylogeny of *Wolbachia* based on *gltA*, *groEL* and *ftsZ* gene sequences: clustering of arthropod and nematode symbionts in the F supergroup and evidence for further diversity in the *Wolbachia* tree. **Microbiology** 151: 4015-4022. Contribution - 35%. SRB performed the research, conducted phylogenetic analyses and helped write the paper.

15. Bordenstein, S.R., M.L. Marshall, A.J. Fry, U. Kim, and J.J. Wernegreen. (2006) The tripartite associations of bacteriophage, *Wolbachia*, and arthropods. **PLOS Pathogens** 2 (5): 384-393. Contribution - 75%. SRB conceived the experiment. SRB, MLM, UK, and AJF performed the research. SRB, MLM, and AJF analyzed data. SRB, MLM, and JJW wrote the paper.
    - Featured in F1000, *The Scientist*

16. Paraskevopoulos, C., S.R. Bordenstein, J.J. Wernegreen, J.H. Werren, and K. Bourtzis. (2006) Towards a *Wolbachia* multilocus sequence typing system: Discrimination of *Wolbachia* strains present in *Drosophila* species. **Current Microbiology** 53(5): 388-395. Contribution - 25%. SRB performed experiments, conducted phylogenetic analyses, and helped write the paper.

17. Baldo, L., Dunning-Hotopp, J., Bordenstein, S.R., Biber, S.A., Jollie, K., Tettelin, H., Maiden M., Hayashi, C., and J.H. Werren. (2006) A multilocus sequence typing system for the endosymbiont *Wolbachia*. **Applied and Environmental Microbiology** 72(11): 7098-7110. Contribution - 10%. SRB was involved in phylogenetic analyses and writing the paper.

18. Lo, N., C. Paraskevopoulos, K. Bourtzis, S.L. O'Neill, J.H. Werren, S.R. Bordenstein, and C. Bandi. (2007) Taxonomic status of the intracellular bacterium *Wolbachia pipientis*. **International Journal of Systematics and Evolutionary Microbiology** 57: 654-657. Contribution - 15%. SRB was involved in writing the review paper.

19. Sanogo, Y.O., S.L. Dobson, S.R. Bordenstein, and R.J. Novak. (2007) Disruption of the *Wolbachia* surface protein gene wspB by a transposable element in mosquitoes of the *Culex pipiens* complex (Diptera: Culicidae). **Insect Molecular Biology** 16(2): 143-154. Contribution - 10%. SRB was involved with analyzing the data and writing the paper.

20. Bordenstein, S.R. and J.H. Werren. (2007) Bidirectional incompatibility among divergent *Wolbachia* and incompatibility level differences among closely related *Wolbachia* in *Nasonia*. **Heredity** 99: 278-287. Contribution - 90%; SRB designed the experiments, conducted the research, and analyzed data. SRB and JHW wrote the paper.

21. Panagiotis I., J. C. D. Hotopp, P. Sapountzis, S. Siozios, G. Tsiamis, S. R. Bordenstein, L. Baldo, J. H. Werren and K. Bourtzis. (2007) New criteria for selecting the origin of DNA replication of *Wolbachia* and closely related bacteria.

BMC Genomics 8(182):1-15. Contribution - 10%. SRB was involved in designing the research and writing the paper.

22. Bordenstein, S.R. (2007) Discover the microbes within: The *Wolbachia* project. **Focus on Microbiology Education** 14(1): 4-5. 100% of the effort is attributable to SRB.
    - Invited article, Special Issue on K-12 Education

23. Bordenstein, S.R. (2007) Evolutionary genomics: Transdomain gene transfers. **Current Biology** 17:R935-R936. 100% of the effort is attributable to SRB.

24. Bordenstein, S.R., C. Paraskevopoulos, J.C. Dunning Hotopp, P. Sapountzis, N. Lo, C. Bandi, H. Tettelin, J.H. Werren and K. Bourtzis. (2009) Parasitism and mutualism in *Wolbachia*: what the phylogenomic trees can and cannot say. **Molecular Biology and Evolution** 26(1): 231-241. 80% of the effort is attributable to SRB; SRB designed the experiments. SRB, CP, JCD, and PS conducted the research. SRB and NL analyzed data. SRB led the writing of the paper.

25. Ishmael, N., J.C. Dunning Hotopp, P. Iaonnidis, S. Biber, J. Sakamoto, V. Nene, J. Werren, K. Bourtzis, S. R. Bordenstein, and H. Tettelin. (2009) Extensive genomic diversity of closely related *Wolbachia* strains. **Microbiology** 155: 2211-2222. Contribution - 30%; SRB was involved in designing the experiments, conducting the research, advising the research technician, analyzing data and writing the paper.

26. The *Nasonia* Genome Working Group (2010) Functional and evolutionary insights from the genomes of three parasitoid *Nasonia* species. **Science** 327: 343-348. Contribution - 2%; SRB was involved in experimental design, advising a technician on the research, analyzing the data and writing portions of the paper.
    - Featured in *National Geographic Daily News, Science Daily,* Vanderbilt Explorations site and press release

27. Chafee, M.E., D.J. Funk, R.G. Harrison, and S.R. Bordenstein. (2010) Lateral phage transfer in obligate intracellular bacteria (*Wolbachia*): Verification from natural populations. **Molecular Biology and Evolution**: 27: 501-505. 85% of the work is from the Bordenstein lab; The lead author was SRB's technician. SRB conceived and designed the experiments. MC performed the research. SRB, RGH, and DJF provided samples. MC and SRB analyzed the data. MC, SRB, and DJF wrote the paper.

28. Kent, B.N. and S.R. Bordenstein. (2010) WO of *Wolbachia*: Lambda of the endosymbiont world. **Trends in Microbiology** 18(4): 173-181. 100% of the work is from the Bordenstein lab; The lead author BNK was a postdoc in the Bordenstein lab. SRB conceived the review. BNK and SRB wrote the manuscript.
    - Cover

29. Bordenstein, S.R., C. Brothers, G. Wolfe, M. Bahr, R. Minckley, M. Clark, J.J. Wernegreen, S.R. Bordenstein, W.S. Reznikoff, and J.H. Werren. (2010) Using the *Wolbachia* bacterial symbiont to teach inquiry-based science: A high school laboratory series. **American Biology Teacher** 72: 478-483. Contribution - 70%; SRB conceived the paper. SRB wrote the majority of the paper with assistance from all coauthors.
    - Journal for The National Association of Biology Teachers
    - Special issue on Earth's Microbes
    - Featured in *The Scientist* and on ABT's cover

30. Gangwer, K.A., C. L. Shaffer, S. Suerbaum, D.B. Lacy, T.L. Cover*, S.R. Bordenstein* (2010). Molecular evolution of the *Helicobacter pylori* vacuolating toxin gene *vacA*. **Journal of Bacteriology** 192: 6126-6135. Contribution - 50%; SRB conceived and designed the experiments with DBL and TLC, advised the graduate students KAG and CLS, helped perform all computational analyses, and contributed to writing portions of the paper.
    - *Co-corresponding authorships

31. Chafee, M.E., C.N. Zecher, M.L Gourley, V.T. Schmidt, John H. Chen$^{\Psi}$, S.R. Bordenstein, M.E. Clark, and S.R. Bordenstein. (2011) Decoupling of host-symbiont-phage coadaptations following transfer to a new host species. **Genetics** 187: 203-215. 100% of this work is from the Bordenstein lab. SRB conceived and designed the experiments, and advised technicians MEC, CNZ, VTS, MLG and JHC in performing the research. SRB and MEC analyzed data and wrote the paper.
    - $^{\Psi}$Vanderbilt undergraduate

32. Newton, I.G. and S.R. Bordenstein. (2011) Correlations between bacterial ecology and mobile DNA. **Current Microbiology** 62(1): 198-211. Contribution - 100% of the work is from the Bordenstein lab; SRB conceived the project. IGN and SRB analyzed the data and wrote the manuscript.

33. Kent, B.N., L. Salichos, J.G. Gibbons, A. Rokas, I.L.G. Newton, M.E. Clark, and S.R. Bordenstein. (2011) Complete bacteriophage transfer in a bacterial endosymbiont determined by targeted genome capture. **Genome Biology and**

Evolution 3: 209-218. Contribution - 85% of the work is from the Bordenstein lab; SRB conceived and designed the research, and helped write the paper. Postdoc BNK led the writing of the paper and implementation of the research. Members of the Rokas Lab in the Department of Biological Sciences (LS, JGG, AR) contributed bioinformatic analyses.

- Cover

34. Rosengaus, R.B., C.N. Zecher, K.F. Schultheis, R.M. Brucker, and S.R. Bordenstein. (2011) Disruption of termite gut microbiota and its prolonged fitness consequences. **Applied and Environmental Microbiology** 77(13):4303-4312. Contribution – 40% of the work is from the Bordenstein lab; SRB conceived and designed the research with RBR at Northeastern University. Technician CNZ and graduate student RMB performed the research with KFS. SRB, RMB, and RBR wrote the paper.
    - Selected by American Society for Microbiology for a press release among all of the Society's journal articles in July
    - Featured by *ScienceDaily*, *MicrobeWorld*, ASM, in *Scientific American*, *GenomeWeb*, *New Scientist* cover story, etc

35. Kent, B.N., L.J. Funkhouser, S. Setia, and S.R. Bordenstein. (2011) Evolutionary genomics of a temperate bacteriophage in an obligate intracellular bacteria (*Wolbachia*). **PLOS One** 6(9): e24984. 100% of the work is from the Bordenstein lab; SRB conceived and designed the work, and wrote major portions of the manuscript. Postdoc BNK led the research and assisted the writing. LJF and SS assisted with computational analyses.

36. Bordenstein, S.R. and S.R. Bordenstein (2011). Temperature affects the tripartite interactions between bacteriophage WO, *Wolbachia*, and cytoplasmic incompatibility. **PLOS One** 6(12): e29106. Contribution - 100% of the work is from the Bordenstein lab. First author SRB conducted the experiments and analyzed the data. Last author SRB conceived and designed the experiments. Both authors wrote the manuscript.

37. Brucker, R.M. and S.R. Bordenstein. (2012) The roles of host evolutionary relationship (genus: *Nasonia*) and development in structuring microbial communities. **Evolution** 66(2): 349-362. 100% of the work is from the Bordenstein lab; SRB advised graduate student RMB in the research, data analysis, and writing of the manuscript.
    - Featured in *Scientific American*, *GenomeWeb*, *New Scientist* cover story

38. Duncan, S.S., P.L. Valk, C.L. Shaffer, S.R. Bordenstein*, and T.L. Cover*. (2012) J-Western forms of *Helicobacter pylori* CagA constitute a major group with a widespread geographic distribution. **Journal of Bacteriology** 194(6): 1593-1604.

Contribution – 40%. TLC and SSD conceived the work. SRB and TLC designed the experiments. SRB, SSD, CLS, and CLV conducted the research. SSD, SRB, and TLC wrote the manuscript.

- *Co-corresponding authorship

39. Brucker, R.M. and S.R. Bordenstein. (2012) Speciation by Symbiosis. **Trends in Ecology and Evolution** 27(8): 443-51. Contribution – 100% of the work is from the Bordenstein lab. SRB wrote the majority of the paper and advised graduate student RMB on portions of the writing. RMB and SRB made the figures.
    - Featured on several blogs, including *ASM's Small Things Considered*, 08/2012
    - 3rd most downloaded article in TREE in the period, September-October, 2012
    - 2nd most downloaded article in TREE in December, 2012 and January, 2013
    - Featured in *New Scientist* cover story, January, 2013

40. Metcalf, J. and S.R. Bordenstein. (2012) The complexity of viruses: The case of endosymbionts. **Current Opinion in Microbiology** 15(4): 546-552. Contribution – 100% of the work is from the Bordenstein lab. Graduate student JM wrote the paper and figures under the guidance of SRB.

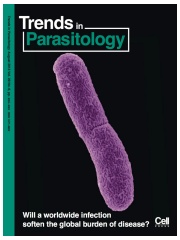
41. Brucker, R.M., L.J. Funkhouser, S. Setia, R. Pauly and S.R. Bordenstein. (2012) Insect Innate Immunity Database (IIID): An annotation tool for identifying immune genes in insect genomes. **PLOS ONE**, 7(9): e45125. 100% of the work is from the Bordenstein Lab. RMB, LJF, and SRB conceived and designed the work. SS, RP, LJF, and RMB conducted the research. RMB, LJF, and SRB wrote the manuscript.

42. Duncan, S.S., P.L. Valk, M.S. McClain, C.L. Shaffer, J.A. Metcalf, S.R. Bordenstein*, and T.L. Cover* (2013) Comparative genomic analysis of East Asian and non-Asian *Helicobacter pylori* strains identifies rapidly evolving genes. **PLOS ONE** 8(1): e55120. Contribution – 40%. TLC, SRB, and SSD conceived the work. SRB and TLC designed the experiments. SRB, CLS, PLV, AND MSM conducted the research. SSD, SRB, and TLC wrote the manuscript.
    - *Co-corresponding authorship

43. Brucker, R.B. and S.R. Bordenstein (2012) *In vitro* cultivation of the Hymenoptera genetic model, *Nasonia*. **PLOS ONE** 7(12): E51269. 100% of the work is from the Bordenstein Lab. RMB conceived, designed, and conducted the research. RMB and SRB wrote the manuscript.

44. Funkhouser, L.J. and S.R. Bordenstein (2013) Mom knows best: The universality of maternal microbial transmission. **PLOS Biology** 11(8): e1001631. 100% of the work is from the Bordenstein lab. LJF and SRB analyzed the literature and wrote the manuscript.
    - Featured in *New York Times* column by Carl Zimmer, DoubleXScience and PLOS Biologue post by Jonathan Eisen, Coffee Break Science blog post

45. LePage, D. and S.R. Bordenstein (2013) *Wolbachia*: Can we save lives with a great pandemic? **Trends in Parasitology** 29(8): 385-393. 100% of the work is from the Bordenstein lab. DLP and SRB wrote the manuscript.
    - Cover



46. Brucker, R.M. and S.R. Bordenstein (2013) The hologenomic basis of speciation: Gut bacteria cause hybrid mortality in the genus *Nasonia*. **Science** 341(6146): 667-669. DOI: 10.1126/science.1240659. 100% of the work is from the Bordenstein lab. RMB and SRB designed the experiments, analyzed the data and wrote the manuscript. SRB conceived the study while RMB performed the study's experiments.
    - Recommended in F1000 Prime
    - Highlighted in top science story of 2013 by *Science News*
    - Radio: BBC Radio, NPR "Living on Earth" and Pacifica Radio Houston
    - Featured in *Discover* Magazine, *Nature* News and Comment, *Nature* News and Views, Vanderbilt Research News, *Science* Now, Futurity, io9, Newswise, GenomeWeb, Headlines and Global News, Le Telegramme (France), PlanetSave, phys.org, Pacific Standard, Science360, Science World Report, New Scientist, Science News, Medical News Today, PBS.org, Sportballa, etc.

47. Brucker, R.M. and S.R. Bordenstein (2013) The capacious hologenome. **Zoology** 116(5): 260-261. 100% of the work is from the Bordenstein lab. RMB and SRB conceived and wrote the invited perspective.
    - Certificated for Highly Cited Research; Top 5 most highly cited papers in Zoology during 2014, 2015, and 2016.

48. Jernigan, K.K. and S.R. Bordenstein (2014) Ankyrin Domains Across the Tree of Life. **PeerJ** 2:e264. 100% of the work is from the Bordenstein lab. Postdoc KKJ and SRB conceived the project, analyzed the data, and wrote the manuscript.
    - Selected for PeerJ Top 20 Picks of 2015

49. Romano-Keeler, J., D.J. Moore, C. Wang, R.M. Brucker, C. Fonnesbeck, J.C. Slaughter, H. Li, H. Correa, H.N. Lovvorn, S. Bordenstein, Y.W. Tang, A.L. George, J.H. Weitkamp (2014) Early life establishment of site-specific microbial communities in the gut. **Gut Microbes** 5:16-15. 25% of the work is from the Bordenstein lab. RMB co-designed the experiment, co-performed the research and co-analyzed data. SRB advised the work and wrote the manuscript.

50. Metcalf, J.A., M. Jo$^{\Psi}$, S.R. Bordenstein, J. Jaenike, and S.R. Bordenstein. 2014 Recent genome reduction of *Wolbachia* in *Drosophila recens* targets phage WO and

narrows candidates for reproductive parasitism. **PeerJ** 2: e529. 100% of the work is from the Bordenstein lab. SRB conceived the study. JAM and MJ conducted the experiments and analyzed the data. JJ provided biological material. All authors wrote the manuscript.

- ΨVanderbilt undergraduate

51. Metcalf, J.A., L.J. Funkhouser-Jones, K. Brileya, A.L. Reysenbach, and S.R. Bordenstein (2014). Antibacterial Gene Transfer Across the Tree of Life. **eLife** 3:e04266, 100% of the work is from the Bordenstein lab. SRB and JAM conceived the project. JAM, LJF, and KB ran experiments. JAM, LJF, and SRB analyzed data. Everyone wrote the manuscript.
    - Featured at *National Geographic*, Not Exactly Rocket Science Blog by Ed Yong, How An Antibiotic Gene Jumped All Over the Tree of Life (10/14), *The Naked Scientists* podcast (12/14), eLife insight (11/14), Popular Science (11/14), Futurity (11/14), Vanderbilt Research News (11/14), Huffington Post (12/14), The Scientist (12/14), Cell Host and Microbe (12/14), Nature Reviews Microbiology (12/14), Aeon (12/14), BBC (6/15), Science & Vie (10/15, France), Daily Beast (6/19)
    - Covered in Front Matter (7/19) for *Proceedings of the National Academy of Science*: "Core Concept: Gene transfers from bacteria and viruses may be shaping complex organisms"

52. Stilling, R.M., S.R. Bordenstein, T.G. Dinan, and J.F. Cryan. 2014. Friends with Social Benefits: Host-Microbe Interactions as a Driver of Brain Evolution and Development? **Frontiers in Cellular and Infection Microbiology** 4:147, 20% of the writing is by SRB.

53. LePage, D.P., K.K. Jernigan, and S.R. Bordenstein (2014). The relative importance of DNA methylation and Dnmt2-mediated epigenetic regulation on *Wolbachia* densities and cytoplasmic incompatibility. **PeerJ** 2:e678. 100% of the work is from the Bordenstein lab. SRB, KKJ, and DLP conceived the project, DLP and KKJ ran experiments and analyzed the data, and SRB and DLP wrote the manuscript.

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55. Flynn, C.R., V.L. Albaugh, S. Cai, J. Cheung-Flynn, P.E. Williams, R.M. Brucker, S.R. Bordenstein, D.H. Wasserman and N.N. Abumrad (2015) Bile diversion to the distal small intestine results in metabolic benefits and is an effective alternative to bariatric surgery. **Nature Communications** 6:7715. 10% of the work is from the Bordenstein lab. RMB and SRB analyzed the data, produced figures, and helped write the text.
    - Collaboration with seven Vanderbilt colleagues

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- F1000 Prime recommendation - Exceptional
- Vanderbilt Research News (08/15), Science Daily (08/15), Futurity (08/15), RedOrbit (08/15), The Hindu (08/15), How Stuff Works (01/16), Gazeta Wyborcza news paper (01/16), Science News (03/16)

57. Van Opstal, E.J. and S.R. Bordenstein (2015) Rethinking heritability of the microbiome. **Science** 349(6253): 1172-1173. 100% of the work is from the Bordenstein Lab. SRB conceived the idea. EVO and SRB wrote the manuscript.
    - *Science* podcast interview (09/15)

58. Funkhouser-Jones, L.J., P. Martinez-Rodriguez, S. Sehnert[Ψ], R. Toribio-Fernandez, M. Pita, J.L. Bella and S.R. Bordenstein (2015) *Wolbachia* co-infection in a hybrid zone: Discovery of horizontal gene transfers from two *Wolbachia* supergroups to an animal genome. **PeerJ** 3:e1479. 90% of the work is from the Bordenstein Lab. SRB conceived the idea, advised the students, provided critical feedback and helped write the paper. Graduate student LJFJ and undergraduate student SS performed 85% the study and analysis. PMR, RTF, MP, JLB performed the remaining part of the study. Everyone contributed to writing the paper which was principally led by LJFJ.
    - [Ψ]Vanderbilt University undergraduate
    - Featured in podcast, This Week in Microbiology, December 17, 2015, Episode sponsored by ASM Microbe 2016 and ASM Biodefense

59. Richmond, B.W., R.M. Brucker, W. Han, R.H. Duo, Y. Zhang, D.S. Cheng, L. Gleaves, R. Abdolrasulnia, D. Polosukhina, P.E. Clark, S.R. Bordenstein, T.S. Blackwell and V.V. Polosukhin (2016) Airway bacteria drive a progressive COPD-like phenotype in mice with polymeric immunoglobulin receptor deficiency. **Nature Communications** 7:11240. 10% of the work, namely the lung microbiome analysis, is from the Bordenstein Lab. RMB performed the analysis. SRB provided constructive feedback on the analysis and writing.

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61. Theis, K.R., N.M. Dheilly, J.L. Klassen, R.M. Brucker, J.F. Baines, T.C.G. Bosch, J.F. Cryan, S.F. Gilbert, C.J. Goodnight, E.A. Lloyd, J. Sapp, P. Vandenkoornhuyse, I. Zilber-Rosenberg, E. Rosenberg, and S.R. Bordenstein (2016) Getting the hologenome concept right: An eco-evolutionary framework for hosts and their

microbiomes. **mSystems** 1(2):e00028-16. SRB conceived the paper, assembled the international group of coauthors, and wrote 60% of the paper.

- mSystems Editor's pick
- Recommended as Good for Teaching in F1000

62. Kohl, K.D., A. Brun, M. Magallanes, J. Brinkerhoff, A. Laspiur, J.C. Acosta, S.R. Bordenstein, E. Caviedes-Vidal (2016) Physiological and microbial adjustments to diet quality permit facultative herbivory in an omnivorous lizard. **Journal of Experimental Biology** 219:1903-1912. 80% of the work was performed by postdoc KDK, who conceived the project, performed the work, and wrote the paper. SRB provided critical feedback (7% of the work) on the experiments and writing.
    - Highlighted in Science (06/16), Journal of Experimental Biology (06/16)

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66. Bojanova, D.P. and S.R. Bordenstein (2016) Fecal transplants: What is being transferred? **PLOS Biology** 14(7): e1002503. 100% of the work is from the Bordenstein lab. SRB conceived the topic. DPB and SRB wrote the paper.
    - July and August, 2016 (select media): New York Times (by Carl Zimmer), Scientific American PLOS Biology press release, Vanderbilt Research News, South China Morning Post, Univision Noticias, FOX WZTV Channel 17 Nashville News, Cosmos Magazine
    - May, 2017: Top 50 most downloaded article in PLOS Biology during 2016

68. Shropshire, J.D.*, E.J. van Opstal*, and S.R. Bordenstein (2016) An optimized approach to germ-free rearing in the jewel wasp *Nasonia.* **PeerJ** 4:e2316. 100% of the work is from the Bordenstein Lab. All authors conceived and designed the experiments and wrote the manuscript. Graduate students J.D.S. and E.V.O conducted the experiments and analysis with supervision from S.R.B.
    - *Co-first authors

69. Bordenstein, S.R. and S.R. Bordenstein. (2016) Eukaryotic association module in phage WO genomes from *Wolbachia*. **Nature Communications** 7:13155. 100% of

the work is from the Bordenstein lab. Both authors conceived the idea, analyzed the data, and wrote the manuscript. Senior Research Specialist SRB performed all experiments.

- October, 2016: Vanderbilt Research News, CNN, National Public Radio, The Atlantic, The Scientist, BBC News, The Washington Post, National Science Foundation 360 News, New Scientist, Live Science, Nature Communications press release
- July, 2017: Virology and Immunology Journal Editorial – Two Hosts or One? Viruses are More Complex than Previously Thought
- Patent granted (2022), Phage-Mediated Manipulation of *Wolbachia*

70. J. Dittmer, E. van Opstal, J.D. Shropshire, S.R. Bordenstein, G.D.D. Hurst and R.M. Brucker. 2016. Disentangling a holobiont - recent advances and perspectives in *Nasonia* wasps. **Frontiers in Microbiology** 7:1478. 25% of the work is from the Bordenstein Lab. EVO, JDS, and SRB contributed equally.

71. Kohl, K.D., A. Brun, M. Magallanes, J. Brinkerhoff, A. Laspiur, J.C. Acosta, E. Caviedes-Vidal and S.R. Bordenstein (2016) Gut microbial ecology of lizards: insights into diversity in the wild, effects of captivity, variation across gut regions, and transmission. **Molecular Ecology** 26(4):1175-1189. 95% of the work is from the Bordenstein Lab. Postdoc KDK performed the research, analyzed the data, and wrote the majority of the manuscript. SRB provided critical feedback on the experiments and writing.

72. Brooks, A.W.*, K.D. Kohl*, R.M. Brucker*, E.J. van Opstal, and S.R. Bordenstein. (2016) Phylosymbiosis: Relationships and functional effects of microbial communities across host evolutionary history. **PLOS Biology** 14(11): e2000225. 100% of the work is from the Bordenstein Lab. SRB conceived the idea and provided critical feedback on all aspects of the work. Graduate students AWB, RMB, EVO and postdoc KDK performed the experiments and analysis. All authors helped write the manuscript.
    - *Co-first authors
    - Select coverage: Vanderbilt Research News, The Scientist, Nature Ecology and Evolution, “Open Highlight” at PLOS Biology
    - Recommended as Excellent in F1000
    - Top 50 most downloaded article in PLOS Biology during 2016

73. LePage, D.P.*, J.A. Metcalf*, S.R. Bordenstein. J. On$^{\Psi}$, J.I. Perlmutter, J.D. Shropshire, E.M. Layton$^{\Psi}$, L.J. Funkhouser-Jones, J.F. Beckmann, S.R. Bordenstein (2017) Prophage WO genes recapitulate and enhance *Wolbachia*-induced cytoplasmic incompatibility. **Nature** 543(7644):243-247 doi: 10.1038/nature21391. 99% of the work is from the Bordenstein lab. DPL, JAM, SRB, JO, LJFJ, and JFB performed the research. All participated in data analysis and writing of the manuscript.
    - *Co-first authors
    - $^{\Psi}$Vanderbilt University undergraduates
    - 2020 Vanderbilt Institute of Chemical Biology Highly Cited Articles Award

- Select coverage: Vanderbilt Research News, Nature News and Views, The Scientist, AOL News, Science News, Nature Reviews Microbiology, This Week in Virology Podcast and Blog
- Patent granted (2023), Cytoplasmic Incompatibility Factors and Methods for Controlling Arthropods

74. Saulsberry, A.[Ψ], M. Pinchas[Ψ], A. Noll[Ψ], J.A. Lynch, R.M. Brucker, and S.R. Bordenstein. (2017) Establishment of F1 hybrid mortality in real time. **BMC Evolutionary Biology** 17:37 doi: 10.1186/s12862-017-0879-1. 95% of the work is from the Bordenstein Lab. Undergraduates AS, MP, and AN performed the majority of the research and analyzed data. JAL contributed microscopy images of hybrid death. Postodc RMB and SRB performed some experiments and analyzed the data. All authors wrote the manuscript, led primarily by AS, RMB, and SRB.
    - [Ψ]Vanderbilt University undergraduates

75. Long, J., Cai, Q., Steinwandel, M., Hargreaves, M.K., Bordenstein S.R., Blot, W.J., Zheng W., and S.O. Shu (2017) Association of oral microbiome with Type 2 diabetes risk. **Journal of Periodontal Research** 52(3):636-643. 5% of the work is from the Bordenstein Lab. SRB advised the project's design and development.
    - Ranked in top 20 most downloaded between July 2016 and June 2018

76. Toribio-Fernandez, R., J.L. Bella, P. Martinez-Rodriguez, L.J. Funkhouser-Jones, S.R. Bordenstein, and M. Pita. (2017) Chromosomal location of *Wolbachia* inserts in the genome of two subspecies of *Chorthippus parallelus* forming a Pyrenean hybrid zone. **Chromosome Research** 25(3-4):215-225. 15% of the work is from the Bordenstein Lab. SRB and former postdoc LJFJ made the initial discovery and helped write the paper.

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79. Kohl, K.D., A. Brun, S.R. Bordenstein, E. Caviedes-Vidal, and W.H. Karasov. (2018) Gut microbes limit growth in house sparrow nestlings (*Passer domesticus*), but not through limitations in digestive capacity. **Integrative Zoology** 13(2):139-151. 75% of the work is from the Bordenstein lab. Postdoc KDK performed all of the research and wrote a draft of the paper. SRB provided critical feedback on analyses and writing of the manuscript.

80. Lindsey, A.R.I., D.W. Rice, S.R. Bordenstein, A.W. Brooks, S.R. Bordenstein* and I.L.G. Newton*. (2018) Evolutionary genetics of cytoplasmic incompatibility genes *cifA* and *cifB*. **Genome Biology and Evolution** 10(2):434-451. 50% of the work is from the Bordenstein Lab. S.R.B. and A.W.B. contributed phylogenetic analyses and writing. S.R.B. conceived the analyses and helped write the paper.
    - *Co-corresponding authors
    - Recommended as Very Good in F1000

81. Funkhouser-Jones, L.J.*, E.J. van Opstal*, A. Sharma[Ψ], and S.R. Bordenstein. (2018) The maternal effect gene *Wds* controls *Wolbachia* titer in *Nasonia*. **Current Biology** 28(11):1692-1702. DOI: https://doi.org/10.1016/j.cub.2018.04.010. 100% of the work is from the Bordenstein lab. SRB conceived the project and produced preliminary data. LJFJ and EJO conducted the majority of the primary research and analyses, with help from AS. SRB and LJFJ wrote the majority of the manuscript together, with help from EVO.
    - *Co-first authors
    - [Ψ]Vanderbilt undergraduate
    - Select coverage: Top Story at National Science Foundation Science 360 and Editor's Choice at *Science* (May 25, 2018); also covered in Science Daily, Technology Org, Vanderbilt Research News, etc.

82. Shropshire, J.D., J. On, E.M. Layton[Ψ], H. Zhou[Ψ], and S.R. Bordenstein. (2018) One prophage WO gene rescues cytoplasmic incompatibility in *Drosophila melanogaster*. **Proceedings of the National Academy of Sciences** 115 (19) 4987-4991, https://doi.org/10.1073/pnas.1800650115. 100% of the work is from the Bordenstein lab. Graduate student JDS conducted the majority of the work and writing with assistance from technician JO and undergraduates EML and HZ. SRB helped conceive and design the project and provided critical feedback on data analyses and writing of the manuscript.
    - Select coverage: Vanderbilt Research News
    - [Ψ]Vanderbilt undergraduates
    - Patent pending, Methods of Cytoplasmic Incompatibility-Based Transgenics for Pest or Vector Control

83. Roux, S., E.M. Adriaenssens, B.E. Dutilh, E.V. Koonin, A.M. Kropinski, M. Krupovic, J.H. Kuhn, R. Lavigne, J.R. Brister, A. Vasani, R.A. Aziz, S.R. Bordenstein, and 47 other coauthors. (2018) Minimum information about uncultivated virus genomes (MIUViG): A community consensus on standards and best practices for describing genome sequences from uncultivated viruses. **Nature Biotechnology** 37: 29–37, SRB contributed 2% of the effort on this viral genomics standards paper from the community.

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86. Romano-Keeler J., M. Shilts, A. Tovchigrechko, C. Wang, R. Brucker, D. Moore, C. Fonnesbeck, S. Meng, H. Correa, H. Lovvorn, Y.W. Tang, L. Hooper, S.R. Bordenstein, S. Das, J.H. Weitkamp. (2018) Distinct mucosal microbial communities in surgical necrotizing enterocolitis are determined by age and antibiotic exposure. **PLOS One** 13(10): e0206366. 10% of the work is from the Bordenstein Lab. Graduate student RMB trained personnel in experiments and analyses; RMB and SRB assisted with the writing.

87. Brooks, A.W., S. Priya, R. Blekhman, S.R. Bordenstein. (2018) Gut microbiota diversity across ethnicities in the United States. **PLOS Biology**. 16(12): e2006842. 95% of the work is from the Bordenstein lab. Graduate student AWB and SRB conceived the project. AWB performed the analyses and wrote initial drafts of the paper. SRB provided critical feedback on analyses and helped write the manuscript. SP and RB contributed to an analysis and writing.
    - Select coverage: Vanderbilt Research News, Vanderbilt Institute for Chemical Biology, News Medical, Nutrition Insight, Technology.Org, etc.
    - 2 page 'Spotlight' feature in *Trends in Microbiology* "Ethnicity-influenced microbiota: A future healthcare perspective" February 2019
    - Featured in *Medical News Today*: Do gut bacteria contribute to ethnic health disparities? 06.28.20

88. Leigh, B.A., S.R. Bordenstein, A.W. Brooks, A. Mikaelyan, and S.R. Bordenstein. (2018) Finer scale phylosymbiosis: insights from insect viromes. **mSystems** 3(6):e00131-18. 100% of the research is from the Bordenstein lab.
    - Editor's pick

89. Reveillaud. J.*, S.R. Bordenstein*, C. Cruaud, A. Shaiber, Ö.C. Esen, M. Weill, I. Rakotoarivony, S.R. Bordenstein, A.M. Eren. (2019) The *Wolbachia* mobilome in *Culex pipiens* includes a putative plasmid. **Nature Communications** 10:1051 | https://doi.org/10.1038/s41467-019-08973-w. 50% of the work is from the Bordenstein lab. Senior Research Specialist Sarah Bordenstein identified the plasmid in metagenome samples provided by collaborators. SRB and SRB critically supervised the project and wrote portions of the MS.
    - *Co-first authors
    - Select coverage: National Science Foundation Science 360, Top News, Marine Biological Laboratory press release, News Medical
    - Patent pending, Plasmid Manipulation of *Wolbachia*

90. Shropshire, J.D., B. Leigh, S.R. Bordenstein, A. Duplouy, M. Riegler, J.C. Brownlie, and S.R. Bordenstein. (2019) Models and nomenclature for cytoplasmic incompatibility: Caution over premature conclusions. **Trends in Genetics** 35(6): 397-399 https://doi.org/10.1016/j.tig.2019.03.004. 95% of the work is from the Bordenstein lab. Graduate student JDS conducted the majority of the writing, and the

remaining authors provided feedback on the figure and writing. SRB critically supervised the project and wrote portions of the manuscript.

91. Sherwin, E., S.R. Bordenstein, T.G. Dinan, and J.F. Cryan. (2019) Social microbes: Microbiota-mediated modulation of the social brain and behavior. **Science** 366 (6465): eaar2016. DOI: 10.1126/science.aar2016. 20% of the review is by SRB.

92. Shropshire, J.D. and S.R. Bordenstein (2019) Two-By-One model of cytoplasmic incompatibility: Synthetic recapitulation by transgenic expression of *cifA* and *cifB* in *Drosophila*. **PLOS Genetics** 5(6): e1008221. https://doi.org/10.1371/journal.pgen.1008221. 100% of the work is from the Bordenstein lab. Graduate student JDS conducted the majority of the work and writing. SRB critically supervised the project and wrote portions of the manuscript.

93. Van Opstal, E. and S.R. Bordenstein (2019) Phylosymbiosis impacts adaptive traits in *Nasonia*. Phylosymbiosis impacts adaptive traits in *Nasonia*. **mBio** 10 (4) e00887-19; DOI: 10.1128/mBio.00887-19. 100% of the work is from the Bordenstein lab. Postdoc EVO conducted the majority of the work and writing. SRB critically supervised the project and wrote portions of the manuscript.

94. Yang, Y., W. Zheng, Q.Y. Cai, M. Shrubsole, Z. Pei, R.M. Brucker, M. Steinwandel, S.R. Bordenstein, Z. Li, W. Blot, X.O. Shu, J. Long (2019) Cigarette smoking and oral microbiota in low-income and African-American populations. **Journal of Epidemiology and Community Health** doi: 10.1136/jech-2019-212474. 3% of the work is from the Bordenstein lab. SRB and RMB trained Vanderbilt colleagues in microbiome experimental design and analysis.

95. Layton, E.[Ψ], J. On, J.I. Perlmutter, S.R. Bordenstein, J.D. Shropshire (2019) Paternal grandmother age affects the strength of *Wolbachia*-induced cytoplasmic incompatibility in *Drosophila melanogaster*. **mBio** 10(6): e01879-19.100% of the research is from the Bordenstein Lab. Undergraduate EML conducted the majority of the research under the supervision of JIP, SRB, and JDS. Technician JO assisted the research. EML, JIP, SRB, and JDS coauthored the manuscript.
    - [Ψ]Vanderbilt undergraduate

96. Perlmutter, J.I., S.R. Bordenstein, D.P. LePage, J.A. Metcalf, T. Hill, J. Martinez, R.L. Unckless, F.M. Jiggins, and S.R. Bordenstein. The phage gene *wmk* is a candidate for male killing by a bacterial endosymbiont. **PLOS Pathogens** 15(9): e1007936. 99% of the work is from the Bordenstein lab. Graduate student JIP conducted the majority of the work and writing. Graduate students DPL and JAM and Senior Research Specialist SRB contributed to the development, analyses, and writing of the manuscript. Collaborators TH, JM, RLU and FMJ contributed unpublished genomes and helped write the manuscript. SRB helped conceive and design the project and provided critical feedback on data analyses and manuscript preparation.
    - Patent granted (2024), Male Arthropod Killing Factors and Methods of Use Thereof

- Featured by the Capsid and Tail global newsletter on bacteriophages and a news release from the Vanderbilt Institute for Chemical Biology

97. Yang, Y., W, Zheng, Q. Cai, M.J. Shrubsole, Z. Pei, R.M. Brucker, M. Steinwandel, S.R. Bordenstein, Z. Li, W.J. Blot, X.O. Shu, J. Long. Racial differences in the oral microbiome: Data from low-income African-ancestry and European-ancestry populations (2019) **mSystems** 4(6): e00639-19 DOI: 10.1128/mSystems.00639-19. 10% of the work is from the Bordenstein Lab. Former graduate student RMB trained personnel in experiments and analyses; RMB and SRB assisted with the writing.

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    - This is a collaborative team effort on behalf of 28 directors of microbiome programs across the United States.

99. Perlmutter, J.I. and S.R. Bordenstein (2020) Microorganisms in the reproductive tissues. **Nature Reviews Microbiology** (18)97–111. 100% of the work is from the Bordenstein Lab. Graduate student JIP wrote the first draft of the manuscript and SRB supervised the review and co-edited the manuscript.

100. Perlmutter, J.I., J. Myers [Ψ], and S.R. Bordenstein (2020) Transgenic testing does not support a role for additional candidate genes in *Wolbachia* male killing or cytoplasmic incompatibility. **mSystems** (5)1:e00658-19
    - [Ψ]Vanderbilt undergraduate

101. Yang, Y., W, Zheng, Q. Cai, M.J. Shrubsole, Z. Pei, R.M. Brucker, M. Steinwandel, S.R. Bordenstein, Z. Li, W.J. Blot, X.O. Shu, J. Long. Reply to Kenyon (2020) "Are differences in the oral microbiome due to ancestry or socioeconomics?" **mSystems** 4(6): e00891-19

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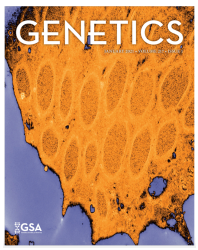
    - Invited contribution to Special issue on 'Application of ecological and evolutionary theory to microbiome community dynamics across systems'
    - Cover

104. Shropshire, J.D., M. Kalra[Ψ], and S.R. Bordenstein (2020) Evolution-guided mutagenesis of the cytoplasmic incompatibility proteins: Identifying CifA's

complex functional repertoire and new essential regions in CifB. **PLOS Pathogens** 16(8): e1008794. https://doi.org/10.1371/journal.ppat.1008794
- ΨVanderbilt undergraduate

105. Shropshire, J.D., B. Leigh, and S.R. Bordenstein (2020) Symbiont-mediated cytoplasmic incompatibility: What have we learned in 50 years? **eLife** 9:e61989

106. Shropshire, J.D., R. RosenbergΨ, and S.R. Bordenstein (2021) The impacts of cytoplasmic incompatibility factor (*cifA* and *cifB*) genetic variation on phenotypes **Genetics** 217(1): iyaa007
- ΨVanderbilt undergraduate
- Cover



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- ΨVanderbilt undergraduate

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- ΨVanderbilt undergraduate

109. Carrier, T.J., B.A. Leigh, D.J. Deaker, H.R. Devens, G.A. Wray, S.R. Bordenstein, M. Byrner, A. Reitzel (2021) Microbiome Reduction and Endosymbiont Gain From a Switch in Sea Urchin Life History. **Proceedings of the National Academy of Sciences** 118 (16) e2022023118 https://doi.org/10.1073/pnas.2022023118

110. Wang, N.C., M. Bagheri, T. Olszewski, K.A. Friese, H.M. Smith, M.E. Robles, C. Wang, A. Brooks, S.R. Bordenstein, J.F. Ferguson, and H.J. Silver (2021) New-onset vegetarian diet shows differences in fatty acid metabolites in European American and African American women. **Nutrition, Metabolism, and Cardiovascular Diseases** 31:8 2436-2448

111. Dutra, H.L.C., S.A. Ford, S.L. Allen, S.R. Bordenstein, S.F. Chenoweth, S.R. Bordenstein, and E.A. McGraw. The Impact of Artificial Selection for *Wolbachia*-Mediated Dengue Virus Blocking on Phage WO. **PLOS Neglected Tropical Diseases** 15(7): e0009637 https://doi.org/10.1371/journal.pntd.0009637

112. Perlmutter, J.I., J.E. Meyers[Ψ], and S.R. Bordenstein (2021). A single synonymous nucleotide change impacts the male killing phenotype of prophage WO gene *wmk*. **eLife** 10:e67686 DOI: 10.7554/eLife.67686
    - [Ψ]Vanderbilt undergraduate

113. Miller, A.K. [Ψ], C.S. Westlake[Ψ], K.L. Cross, B.A. Leigh, and S.R. Bordenstein (2021) The microbiome impacts host hybridization and speciation. **PLOS Biology** 19(10): e3001417
    - [Ψ]Vanderbilt undergraduate

114. Bell, K. and S.R. Bordenstein (2022). A Margulian View of Symbiosis and Speciation: the *Nasonia* Case System. **Symbiosis** https://doi.org/10.1007/s13199-022-00843-2
    - Special issue honoring the legacy of Lynn Margulis (edited by Jaime Foster and Margaret McFall-Ngai)

115. Kaur, R. B.A. Leigh, I.T. Ritchie, and S.R. Bordenstein (2022) The Cif proteins from *Wolbachia* prophage WO modify sperm genome integrity to establish cytoplasmic incompatibility. **PLOS Biology** 20(5): e3001584
    - Highlighted article on top of front page at PLOS Biology website

116. Markowitz, R.H.G., A.L. LaBella, M. Shi, A. Rokas, J.A. Capra, J.F. Ferguson, J.D. Mosley, and S.R. Bordenstein (2022) Microbiome-associated human genetic variants impact phenome-wide disease risk. **Proceedings of the National Academy of Sciences** 119(26):e2200551119.

117. Bordenstein, S.R. and S.R. Bordenstein (2016) Widspread phages of endosymbionts: Phage WO genomics and the proposed taxonomic classification of Symbioviridae. **PLOS Genetics** 6;18(6):e1010227.

118. Ritchie, I.T., K.T. Needles, B.A. Leigh, R. Kaur, and S.R. Bordenstein (2022) Transgenic cytoplasmic incompatibility persists across age and temperature variation in *D. melanogaster*. **iScience** 25(11): 105327 https://doi.org/10.1016/j.isci.2022.105327

119. Chioma, O.S., E.K. Mallott, A. Chapman, J.C. Van Amburg, H. Wu, B. Shah-Gandhi, N. Dey, M. Kirkland, M.B. Piazuelo, J. Johnson, G.R. Bernard, S.R. Bodduluri, S. Davison, B. Haribabu, S.R. Bordenstein, W.P. Drake (2022) Gut microbiota modulates lung fibrosis severity following acute lung injury in mice. **Communications Biology** 5:1401. https://doi.org/10.1038/s42003-022-04357-x

120. Li, J., R.H. Markowitz, A.W. Brooks, E.K. Mallott, B.A. Leight, T. Olszewski, H. Zare, M. Bagheri, H.M. Smith, K.A. Friese, I. Habibi, W.M. Lawrence, C.L. Rost, A. Ledeczi, A.M. Eeds, J.F. Ferguson, H.J. Silver, S.R. Bordenstein (2022) Individuality and ethnicity eclipse a short-term dietary intervention in shaping microbiomes and viromes. **PLOS Biology** 20(8): e3001758 https://doi.org/10.1371/journal.pbio.3001758

121. Chioma, O.S., E.K. Mallott, B. Gandhi, Z. Wiggins, M. Langford, A. Lancaster, A. Gelbard, H. Wu, J. Johnson, L. Lancaster, E. Wilfong, L. Crofford, C. Montgomery, L.V. Kaer, S.R. Bordenstein, D. Newcomb, and W.P. Drake (2023) Low gut microbial diversity augments estrogen-driven pulmonary fibrosis in female-predominant interstitial lung disease. **Cells** 12(5), 766 https://doi.org/10.3390/cells12050766.

122. Mallott, E.K., A.R. Sitarik, L.D. Leve, C. Cioffi, C.A. Camargo Jr, K. Hasegawa, S.R. Bordenstein (2023) Human microbiome variation associated with race and ethnicity emerges as early as three months of age. **PLOS Biology** 21(8): e3002230.
    - Penn State Press Release 08.17.23, "Gut bacteria variation among human social groups emerges by three months of age"
    - Featured in ASM News Digest, News Medical, Technology Today, Physician's Weekly, etc.

123. Ginnan, N. and S.R. Bordenstein (2023) It is time to authenticate the Microbiome Sciences with accredited educational programs and departments. **PLOS Biology** 21(12): e3002420 https://doi.org/10.1371/journal.pbio.3002420
    - Penn State Press Release 12.08.23, "Penn State researchers propose a path to authenticate the Microbiome Sciences"

124. Kaur, R., A. McGarry, J.D. Shropshire, B.A. Leigh, and S.R. Bordenstein (2024) Prophage proteins of an insect symbiont modulate sperm noncoding RNA and DNA to kill embryos. **Science** 383 1111-1117 science.org/doi/10.1126/science.adk9469
    - Penn State Press Release 3.08.24, "How does a virus hijack insect sperm to control disease vectors and pests?"
    - Featured in Phage Directory blog, Nature Reviews Microbiology, Technology Networks, Microsoft Network, Mirage News, Bioengineer.org, Nouvelles du monde, Science Daily, etc.

125. Kaur, R., C.J. Meier, E.A. McGraw, J.F. Hillyer, and S.R. Bordenstein (2024) The mechanism of cytoplasmic incompatibility is conserved in *Wolbachia*-bearing *Aedes aegypti* mosquitoes deployed for arbovirus control. **PLOS Biology** 20(5): e3001584
    - Kudos research highlight, 04.04.24, "Understanding how tiny bacteria control mosquito sperm development to stop disease spread" Link.

126. Bordenstein, S.R. and the Holobiont Biology Network (2024) The disciplinary matrix of holobiont biology. **Science** 386 (6273) 731-732. Link.
    - Featured in The Microbiologist, Earth.com, La Scienze, Mirage News, etc.

127. Kaur, R. and S.R. Bordenstein (2025) Cytoplasmic incompatibility factor proteins from *Wolbachia* prophage are costly to sperm development in *Drosophila melanogaster*. **Proceedings of the Royal Society London B** 292: 20243016. Link.

128. Brunner, A., C. Gauliard, J. Tutagata, S.R. Bordenstein, S.R. Bordenstein, B. Trouche, and J. Reveillaud (2025) *Wolbachia* and its pWCP plasmid show

differential dynamics during development of *Culex* mosquitoes. **Microbiology Spectrum** 0:e00046-25. Link.

129. Ginnan, N., S.G. Crandall, M. Imchen, F. Dini-Andreote, T.I. Miyashiro, V. Singh, E. Ganda, S.R. Bordenstein (2025) Ecologically expanding the One Health framework to unify the microbiome sciences **mBio** 16:e03147-24. Link.
    - Penn State Press Release 06.10.25, "Q&A: Unifying microbiome sciences for global health and sustainability"

130. Ferretti, P.*, M.M. Martignoni*, L.C. McManus, T. Sakal, A. Liaghat, B. Stevens, K.J.M. Dahlin, L.S. Souza, Z.G. Cardon, C.B. Silveira, S.R. Bordenstein**, and J. Roughgarden** (2025) Theory of host-microbe symbioses: Challenges and Opportunities. **Cell Host & Microbe** 33 (7):1052-1056. Link.
*Co-first authors | **Co-senior authors

131. Vay Syoc, E.P., E.R. Davenport, and S.R. Bordenstein (2025) Gut fungi are associated with human genetic variation and disease risk. **PLOS Biology** 23(9): e3003339. Link.
    - Penn State Press Release 09.03.25, "Connection among gut fungi, genetics and disease risk in humans identified"
    - Featured in press by PLOS Biology, Microbiome Times, Medical Xpress, Nutrition Insight, Mirage News, ScienMag, etc.
    - Provisional Patent established for modulating cardiovascular disease risk through gut fungi

132. Gilbert, J.A., R.S. Peixoto, A.H. Scholz, M.G.D Bello, L. Korsten, G. Berg, B. Singh, A. Boetius, F. Wang, C. Greening, K. Wrighton, S.R. Bordenstein, J.K. Jansson, J.T. Lennon, V. Souza, T. Thomas, D. Cowan, T.W. Crowther, N. Nguyen, L. Harper, L-P Haraoui, S. Ishaq, and K. Redford (2025) Launching the IUCN Microbial Conservation Specialist Group as a global safeguard for microbial biodiversity. **Nature Microbiology**. https://doi.org/10.1038/s41564-025-02113-5 Link.
    - Penn State Press Release 10.01.25, "New microorganism survival commissions aims to fill critical conservation gap"
    - Featured in press by The Microbiologist, Microbiota Vault, New Indian Express, MSN, Scienmag, ISME, etc.

133. Lefoulon, E., S.R. Bordenstein, L.R. Carpenter, J.L. Buchser, C.J. Nowicki[Ψ], A.A. Yahkhnina, J.B. Gutierrez, R. Kaur, M. Imchen, and S.R. Bordenstein (2025) Evolutionary diversification and functions of the candidate male killing gene *wmk*. **Genome Biology and Evolution** evaf179 Link.
    - [Ψ]Penn State Press undergraduate

134. Vay Syoc, E.P., A. Gomez, E.R. Davenport, and S.R. Bordenstein (2025) Gut fungal profiles reveal phylosymbiosis and codiversification across humans and nonhuman primates. **PLOS Biology** 23(9): e3003390 Link.
    - Featured in press by Nature Reviews Microbiology.

135. Gilbert, J.A., A.H. Scholz, M.G.D Bello, L. Korsten, G. Berg, B. Singh, A. Boetius, F. Wang, C. Greening, K. Wrighton, S.R. Bordenstein, J.K., Jansson, J.T. Lennon, V. Souza, S.M. Allard, T. Thomas, D. Cowan, T.W. Crowther, N. Nguyen, L. Harper, L-P Haraoui, S. Ishaq, K. Redford, and R.S. Peixoto (2025) Safeguarding microbial biodiversity: microbial conservation specialist group within the species survival commission of the International Union for Conservation of Nature. **mSystems** 0:e01505-25 Link.

136. Gilbert, J.A., A.H. Scholz, M.G.D Bello, L. Korsten, G. Berg, B. Singh, A. Boetius, F. Wang, C. Greening, K. Wrighton, S.R. Bordenstein, J.K., Jansson, J.T. Lennon, V. Souza, S.M. Allard, T. Thomas, D. Cowan, T.W. Crowther, N. Nguyen, L. Harper, L-P Haraoui, S. Ishaq, K. Redford, and R.S. Peixoto (2025) Safeguarding microbial biodiversity: microbial conservation specialist group within the species survival commission of the International Union for Conservation of Nature. **FEMS Microbiology Ecology** 101(12): fiaf107 Link.

137. Gilbert, J.A., A.H. Scholz, M.G.D Bello, L. Korsten, G. Berg, B. Singh, A. Boetius, F. Wang, C. Greening, K. Wrighton, S.R. Bordenstein, J.K., Jansson, J.T. Lennon, V. Souza, S.M. Allard, T. Thomas, D. Cowan, T.W. Crowther, N. Nguyen, L. Harper, L-P Haraoui, S. Ishaq, K. Redford, and R.S. Peixoto (2025) Safeguarding microbial biodiversity: microbial conservation specialist group within the species survival commission of the International Union for Conservation of Nature. **The ISME Journal** 19(1):wraf239 Link.

138. Gilbert, J.A., A.H. Scholz, M.G.D Bello, L. Korsten, G. Berg, B. Singh, A. Boetius, F. Wang, C. Greening, K. Wrighton, S.R. Bordenstein, J.K., Jansson, J.T. Lennon, V. Souza, S.M. Allard, T. Thomas, D. Cowan, T.W. Crowther, N. Nguyen, L. Harper, L-P Haraoui, S. Ishaq, K. Redford, and R.S. Peixoto (2025) Safeguarding microbial biodiversity: microbial conservation specialist group within the species survival commission of the International Union for Conservation of Nature. **Sustainable Microbiology** 2(4):qvaf024 Link.

139. Kaur, R., M. Kalra[Ψ], M. Imchen, B.L. Crowley, A. McGarry, L. Carpenter, and S.R. Bordenstein. (2025) Histone acetylation modulation by a small molecule inhibitor recapitulates symbiont-induced cytoplasmic incompatibility. **Cell Reports** 44(10): 116416 Link.
    - [Ψ]Vanderbilt Undergraduate

Patents granted

Bordenstein, S.R. and J.I. Perlmutter (2024) “Male Arthropod Killing Factors and Methods of Use Thereof”. VU 18100, Serial number PCT/US19/25936 (USA). Equal inventorship.

Metcalf, J.A., D.L. Lepage, S.R. Bordenstein, S.R. Bordenstein, M. Hochstrasser, J. Beckmann, and J. Ronau (2023) "Cytoplasmic Incompatibility Factors and Methods for Controlling Arthropods", VU16060, Serial number 16/307,982 (USA). Equal inventorship.

- Technology spotlight by the Vanderbilt Center for Technology Transfer and Commercialization, January 2018

Bordenstein, S.R. and Bordenstein, S.R. (2022) "Phage-Mediated Manipulation of *Wolbachia*", VU16116, Serial numbers 16/093,808 (USA), 17783259.9 (Europe), 2017250819 (Australia). Equal inventorship.

Patents pending

Bordenstein, S.R. and Bordenstein, S.R. (2022) "Plasmids for Manipulation of *Wolbachia*", Equal inventorship.

Bordenstein, S.R. and J.D. Shropshire (2018) "Methods of Cytoplasmic Incompatibility-Based Transgenics for Pest or Vector Control". VU18134, PCT/US19/26736. Equal inventorship.

Kaur, R. and S.R. Bordenstein (2024) "Compositions and methods for cytoplasmic incompatibility control of arthropods", Equal inventorship, Penn State University

Non-refereed articles, opinions, and commentaries

1. Bordenstein, S.R. (2012) Science of a Superorganism. **Bare Essentials**, May 1.

2. Bordenstein, S.R. (2014) Genomic and Cellular Complexity from Symbiotic Simplicity. **Cell** 158(6): 1236-1237.

3. Bordenstein, S.R. (2014) Book review of The Hologenome Concept: Human, Animal and Plant Microbiota. **Microbe** 9(11) 466-467.

4. Bordenstein, S.R. (2016) Book review of I Contain Multitudes (Ed Yong, Harper Collins) Lean on we: How eco-evolution permeates animal-microbe associations. **Trends in Ecology and Evolution** 31(11): 815-816.

5. Perlmutter, J.I. and S.R. Bordenstein (2018) Microbial misandry: discovery of a *Spiroplasm*a male-killing toxin. **Cell Host & Microbe**, DOI: https://doi.org/10.1016/j.chom.2018.05.011

6. Lemon, A., S.R. Bordenstein, and S.R. Bordenstein (2020) Discover the Microbes within! The *Wolbachia* Project: Citizen science and student-based discoveries for 15 years and counting. **Genetics** 216: 263-268
    - The Scientist Digest, Highlight, 11.01.24, "A Microbial Ally to Bring Science to the Masses" Link.

7. Cross, K.L. and S.R. Bordenstein (2022) Comparison of qPCR and dPCR methods for the quantification of *Wolbachia* densities and arthropod gene expression. **Qiagen Application Note** March, 2022. https://t.co/liM9PUJGq2

8. Ginnan, N. and S.R. Bordenstein (2023) Free film and panel discussion reveals 'invisible' crisis of the microbial world. **Penn State News**, February 2023. https://www.psu.edu/news/huck-institutes-life-sciences/story/free-film-and-panel-discussion-reveals-invisible-crisis/

9. Imchen, M. and S.R. Bordenstein (2025) Reproductive biology through the lens of the microbiome. **The Microbiologist** by Applied Microbiology International. Link.

10. Bordenstein, S.R. (2026) Nominate the next Microbiome Medal Laureate. **Penn State News**. Link.

Book chapter (invited)

1. Bordenstein, S.R. (2003) Symbiosis and the origin of species. In **Insect Symbiosis**, edited by K. Bourtzis and T. Miller. CRC Press: New York. Pages 283-304. 100% of the effort is attributable to SRB.

Articles in conference proceedings

1. Goodrich-Blair, H., J.M. Ane, J. Bever, S.R. Bordenstein et al. (2010) Symbiosis research, technology, and education: An overview of the 6th International Symbiosis Society Congress. **Symbiosis** 51: 1-12. Contribution - 8%; This paper is a summary of the sessions at the conference. SRB wrote the summary section for the session that he chaired.

2. Stock, S.P., S.R. Bordenstein, J. Odden, D. Oldenburg, W. Reznikoff, J.H. Werren, and M.A. Selosse. (2010) Symbiosis Instruction: Considerations from the Education Workshop at the 6th ISS Congress. **Symbiosis** 51:67-73. Contribution - 20%; This paper is a review of the education session at the 2009 ISS conference. SRB helped write the section of the paper that is based on the HHMI high school outreach project.

Grants received ($12.5 million in total, current funding)

2025-2030	National Institutes of Health, NIGMS, T32 Graduate Training Program, "Biotechnological and Integrative Opportunities in Microbiome Sciences (BIOMS)", $3,167,485 (total), Role: Co-PI
2025-2030	National Institutes of Health, NIGMS, R01 AI189624 "The Molecular Mechanism of a Male Killing Gene", $2,955,653 (total), Role: PI
2024-2025	National Institutes of Health, NIDDK F32 Ruth L. Kirschstein Postdoctoral Fellowship to Dr. Emily Van Syoc, "The Genetic, Symbiotic, and Evolutionary Bases of the Human Gut Mycobiome" Mentor to Dr. Van Syoc: $230,868 (total)
2024-2029	National Institutes of Health, NIAID R01, "The Epigenetics of Cytoplasmic Incompatibility", $3,440,609 (total), Role: Co-PI
2024-2029	United States Department of Agriculture, National Institute of Food and Agriculture, Training Grant, "Graduate Training in the Reproductive Microbiome", $238,500 (total), Co-PI

2024	Center for Human Evolution and Diversity, Penn State University, Seed Grant Award for Postdoc Dr. Emily Van Syoc, "Heritability of the human gut mycobiome", $5350 (total), Co-I
2023-2028	National Institutes of Health, R01 DA056484-01A1, "The Role of the Microbiome Composition in Amphetamine Abuse", NIDA, $2,694,021 (total), $1,847,520 (direct costs), $846,501 (indirect costs), Role: Co-Investigator. Primary Investigators: Aurellio Galli and Angela Carter at the University of Alabama Medical Center
2023-2025	Children's Miracle Network, "Salivary Metatranscriptome in Preterm Infants with Necrotizing Enterocolitis and Chronic Lung Disease" $50,000 (total and direct costs), Role: Co-I with Dr. Roopa Siddaiah at Penn State College of Medicine, Hershey, PA
2023-2024	Penn State Cancer Institute, "The Microbiome and Breast Cancer in the Context of Social Vulnerability", $60,000 (total costs) with cost sharing by the Bordenstein Lab, Role: Co-PI with Louisa Holmes in the Department of Geography and Population Research Institute
2021-2022	Vanderbilt Ingram Cancer Center Transformative Cancer Research Funding, "The Genome-Microbiome-Cancer Triad", $15,819 (total costs), $10,000 (direct costs), $5,819 (indirect costs) Role: PI
2021-2022	National Science Foundation Postdoctoral Fellowship in Biology for Karissa Cross, "Conflict Resolution: How to Train Your Inherited Bacteria" Mentor to Karissa Cross: $207,000 (total)
2020-2025	National Institutes of Health, R01, "The Mechanistic Basis of Cytoplasmic Incompatibility", Principal Investigator: $1,953,949 (total), $1,250,000 (direct costs), $703,950 (indirect costs)
2020-2023	Vanderbilt Trans-Institutional Programs, Reinvestment Award, "The Vanderbilt Microbial Alliance for Precision", Co-lead and Director of the Vanderbilt Microbiome Innovation Center, $510,000 (direct costs)
2019-2021	National Institutes of Health NIDDK, P20, "The Vanderbilt Urologic Infection Repository, A Resource for Personalized Clinical Recovery", Co-Investigator and Postdoc Co-mentor: $18,411 (total), Direct ($11,726), Indirect ($6,684)
2019-2020	Avantor Sciences Foundation Award for science education, $10,000 (total) to Sarah Bordenstein
2019-2022	National Institutes of Health, F32 for postdoc Brittany Leigh, "The Mechanistic Basis of How Symbionts Assist Vector Control" Mentor to Dr. Leigh: $186,582 (total)
2019-2020	National Institutes of Health F31 Ruth L. Kirschstein Predoctoral Individual National Research Service Award for Jessamyn Perlmutter, "The Mechanistic Basis of *Wolbachia*-Induced Male Killing" Mentor to Jessamyn Perlmutter: $29,376 (total)
2018-2020	Vanderbilt Trans-Institutional Programs, ViA, "The Initiative for Personalized Microbial Discovery and Innovation", Faculty participant, $200,000 (years 1 and 2 total, direct costs)

2018-2020 Vanderbilt Trans-Institutional Programs, ViA, "Vanderbilt Initiative for the Study of Antimicrobial Resistance Drivers", Faculty participant, $200,000 (years 1 and 2 total, direct costs)

2017-2022 National Institutes of Health, R01, "The Genetic Basis of Cytoplasmic Incompatibility", Principal Investigator: $1,951,071 (total), $1,250,000 (direct costs), $707,071 (indirect costs)

2017-2020 National Institutes of Health, R21 "*Wolbachia* Genes That Mediate Male Killing", Principal Investigator: $420,681 (total), $275,000 (direct costs), $145,681 (indirect costs)

2017-2019 Vanderbilt Trans-Institutional Programs, ViA, "The Vanderbilt Microbiome Initiative", Lead Investigator: $175,000 (years 1 and 2 total, direct costs)

2015-2020 National Science Foundation IOS Symbiosis, Defense, and Self-Recognition, "The Genetic Architecture of Maternal Suppression of Symbionts" PI, $957,524 (total), $609,943 (direct costs), $347,581 (indirect costs)

- Featured at GenomeWeb, News Medical, Phys.org, Vanderbilt Research News

2016-2018 National Institute of Health, R21 "*Wolbachia* Genes That Mediate Cytoplasmic Incompatibility", Principal Investigator: $431,511 (total), $275,000 (direct costs), $156,511 (indirect costs)

2017 Vanderbilt Office of Equity, Diversity and Inclusion Research Award, “Population Diversity Shapes the Trillions of Microbes Inhabiting the Human Digestive Tract”, Principal Investigator: $4,526 (direct costs)

2017 Sponsor for DFG German Research Foundation Award for Individual Postdoctoral Fellowship to Dr. Aram Mikaelyan, $49,302

2015-2017 Beckman Scholars Foundation "Vanderbilt University Beckman Scholars Program", Co-Investigator with Jeffrey Johnston as Principal Investigator: $156,000 (total/direct costs) to support six scholars per year for three years

2015-2017 National Science Foundation Doctoral Dissertation Improvement Grant for Daniel LePage, "The Genetic Basis of Cytoplasmic Incompatibility" PI, $20,410 (total)

2011-2017 National Science Foundation, “Dimensions: The Microbial Basis of Animal Speciation”, Principal Investigator: $1,268,861 (total), $817,609 (direct costs), $451,252 (indirect costs)

- New NSF program
- Featured in NSF press release 10-179
- Featured in NSF project manual
- Featured on Vanderbilt Home Page & Research News

2008-2014 National Institute of Health, R01, “Molecular evolution and lifecycle of *Wolbachia* bacteriophage”, Principal Investigator: $1,228,000 (total), $791,280 (direct costs), $436,720 (indirect costs)

- Featured in NIH press release, *Taking the Bite Out of Vector-Borne Diseases, 03/27/13*

2012-2013 Sponsor for National Institute of Health F32 Ruth L. Kirschstein National Research Service Award for Individual Postdoctoral Fellowship to Dr. Kristin Jernigan, $52,190

2011-2014 Sponsor for National Science Foundation, Graduate Research Fellowship to Lisa Funkhouser: $90,000 (stipend total for three years), $10,500 (cost-of-education allowance)

2011-2012 National Institute of Health S10, Shared Instrumentation Grant, Illumina HiSeq2000, Major User (Principal Investigator: Al George), $515,00 (direct costs)

2010-2012 Discovery Grant, Vanderbilt "The infectious basis of hybrid mortality in an insect model", Principal Investigator: $50,000 (total), $50,000 (direct costs), NA (indirect costs)

2008-2012 National Science Foundation, "Bacteriophages in endosymbiotic bacteria", Principal Investigator: $411,440 (total), $268,039 (direct costs), $143,401 (indirect costs).

2008 Howard Hughes Medical Institute Precollege Science Education Initiative, "The Muse of Fire Project", Co-Director: $50,000 (total), $50,000 (direct costs), NA (indirect costs)

2007-2008 Howard Hughes Medical Institute Precollege Science Education Initiative, "The *Wolbachia* Project: Discover the Microbes Within!", Founding Director: $150,000 (total), $150,000 (direct costs), NA (indirect costs)

2003-2008 NASA Astrobiology Institute NAI02-0026-0017, "From Early Biospheric Metabolisms to the Evolution of Complex Systems", Co-Investigator: $511,639 total of $4,757,693 team grant (total), $330,093 (direct costs), $181,546 (indirect costs)

2003-2008 National Science Foundation, "Integrative Studies of *Wolbachia*-Eukaryotic Interactions: Genomes to Communities and Back", PI on Subcontract to MBL: $315,314 of $4,990,738 team grant (w/J. Werren, PI) (total), $203,427 (direct costs), $111,887 (indirect costs)

2004 Neal W. Cornell Endowed Research Fund, PI, $10,000 (total), $10,000 (direct costs), NA (indirect costs)

2003 National Research Council and NASA Astrobiology Institute Postdoctoral Fellowship (Renewal of 2002 Award)
Fellow: $50,000 total award (total), $50,000 (direct costs), NA (indirect costs)

2002 National Research Council and NASA Astrobiology Institute Postdoctoral Fellowship, "Genomic determinants of mutualism and parasitism in bacterial endosymbionts" Fellow: $45,000 total award (total), $45,000 (direct costs), NA (indirect costs)

Research grant and foundation proposals currently under review

INVITED SEMINARS AND CONFERENCE ORGANIZATION ROLES (SINCE 2008)

2026

Keynote opening for New Mathematical Theory in Eco-Evolutionary Modelling of Host-Symbiont Communities "A Unified View of Life: Holobiont Biology in the 21st Century", Banff International Research Station, Banff, Canada

Keynote and panel opening for the Microbiome Times Partnership Forum "A Unified View of Life: Holobiont Biology for the 21st Century", Copenhagen, Denmark

Research talk for New Mathematical Theory in Eco-Evolutionary Modelling of Host-Symbiont Communities "Darwin's Blind Spot: The Symbiotic Basis of Speciation", Banff International Research Station, Banff, Canada

Millenium Science Cafe Speaker for Penn State University's Huck Institutes of the Life Sciences and Materials Science Institute. "Symbiosis by Design: Engineering a Culture of Science" Penn State University, University Park, PA

2025

Keynote Presentation for Penn State University Capital Campaign Leadership Council Meeting - President, Development Office, and Committee Members in attendance, Palm Beach, Florida

Keynote Speaker for International Conference on "Microbiomes, Biodiversity, and Their Impacts on Global and One Health Challenges", hosted by University of South Florida and Institut Merieux, Tampa, FL

Keynote Speaker for Trends in Marine Host-Microbe Symbioses Symposium, "A Unified View of Life: Holobiont Biology for the 21st Century" University of Padua, Italy

Invited Seminar, "Symbionts and the Central Dogma of Sperm Biology", Sloan Kettering Institute, New York City, New York

Industry Webinar Q&A "Conversation with Dr. Seth Bordenstein, Director of the One Health Microbiome Center" Institut Merieux, France, remote

QIAGEN Webinar "Why Diversity Matters in the Human Microbiome Sciences", Germany, remote presentation for international audience

Presentation for graduate students in the Medical Scientist Training Program "Microbiome Science: The Ignited Giant of Biology", College of Medicine, Penn State, Hershey, PA

Presentation for Vector-Borne Disease Challenges, Penn State University, SAFES

Podium Speaker for Gordon Research Conference on Microbial Adhesion and Signal Transduction, Newport, RI (declined due to conflict)

Keynote speaker for inception workshop on the Legal Rights of Microbes, Geneva Graduate Institute, Switzerland (declined)

One Health Initiative Seminar Series, University of Tennessee at Knoxville, TN (declined)

2024 Keynote Speaker for Darwin Day, "Darwin's Blind Spot: The Microbial Making of Holobionts", School of Biological, Environmental, and Earth Sciences, University of Southern Mississippi

Keynote Speaker for Rutgers University Microbiome Symposium, "The Hidden Symphony Within: Unveiling the Microbiome Secrets of Sexual Reproduction, Animal Speciation, and Human Diversity", Rutgers University, New Jersey

Keynote Speaker for Microbiome Virtual International Forum, "The Microbe's Master Plan to Control Sperm and Shape Generations" 10.52843/cassyni.2r2x8m

Podium Speaker for Gordon Research Conference on Genetic Biocontrol, "Modifying the Sperm Epigenome Spreads a Maternally-Inherited Symbiont", Barcelona, Spain

Multi-Omics in Precision Medicine, "Prioritizing Diversity in the Human Microbiome Sciences", University of Pennsylvania, Philadelphia, PA

Applied Hologenomics II, "Winds of Change: Breathing a New Disciplinary Matrix into Biology", University of Copenhagen, Center for Evolutionary Hologenomics, Denmark

Virtual Microbiology Journal Club "From Germline to Generations: Secrets of a Reproductive Symbiont (*Wolbachia*) After 100 Years of Exploration", Online, Hebrew University of Jerusalem, Israel

Mini-Symposium on Mosquito Biology & Control, "Sperm Sabotage by a Bacterial Symbiont (*Wolbachia*): The Secrets of

Cytoplasmic Incompatibility After 100 Years of Exploration", Taiwan National Health Research Institutes

Keynote Speaker for Department of Biology Retreat, University of Rochester, Rochester, NY (declined speaker invitation due to conflict)

2023 Keynote Speaker for the Phi Sigma Research Symposium , "An Imperative to Unbias Human Microbiome Studies', Beta Lambda Chapter, Illinois State University

Keynote Speaker for Life Sciences Research Symposium, "Prioritizing Diversity in the Human Microbiome Sciences", University at Albany, State University of New York

Podium Speaker, Gordon Research Conference on Animal-Microbe Symbioses, "The Cell Biological Mechanisms of a Symbiotic Drive System Deployed in Vector Control", Tuscany, Italy

Frontiers in Genetics and Genomics, "Prioritizing Diversity in the Human Microbiome Sciences", University of California at Los Angeles

11th Wolbachia Conference, "The Cell Biological Mechanism of Cytoplasmic Incompatibility", Kolymbari, Crete, Greece

11th Wolbachia Conference, "CifA and CifB Are Both In Vitro Nucleases That Promote Spermatid DNA Damage", Kolymbari, Crete, Greece

Microbiome Analysis through Island Knowledge and Investigation Manoa Microbiome Meeting seminar series, "A Great Pandemic Reformulated as a Vector Control Tool: Genes, Mechanisms, and Implications", U. of Hawaii at Manoa

Department of Cell Biology and Molecular Genetics, Microbiome Center, Institute for Advanced Computer Studies, "One Health Microbiome Sciences", University of Maryland, College Park.

Science on the Spot, "Got Change for a Paradigm: The Microbiome Revolution", Speaking Tour for Pennsylvania State University, Philadelphia and Washington D.C.

Discover Seminar Series, "Bringing Diversity to the Human Microbiome Sciences", College of Medicine, Pennsylvania State University, Hershey, PA

The Millenium Café, “Got Change for a Paradigm: The Microbiome Millenium”, Huck Institutes of the Life Sciences, Pennsylvania State University, University Park, PA

Kitchen Cabinet, “Looking Back to Look Ahead”, Huck Institutes of the Life Sciences, Pennsylvania State University, University Park, PA

Department of Geography Coffee Hour Colloqium Series “Why We Look Down (To The Microbes) For Wonder, Impact, and Discovery”, Pennsylvania State University, University Park, PA

College Connections Lecture on the One Health Microbiome Center, College Relations, College of Agricultural Sciences, Pennsylvania State University, University Park, PA

The Jacques Monod International Conference on “Insect Models for Infection Biology”, Station Biologique de Roscoff, France (declined due to travel conflict)

International Conference on Microbiome: Human, Plant, and Environmental Health, Abu Dhabi Agricultura and Food Safety Authority and United Arab Emirates University, Abud Dhabi (declined due to travel conflict)

2022 Invited Keynote Speaker for the inaugural Applied Hologenomics Conference, Bilbao, Basque Country, Spain

Invited Keynote Speaker for the Rust Belt Microbiome Conference, “Rules of Symbiotic Life”, Center for Medicine and the Microbiome, University of Pittsburgh, Carnegie Mellon University, Pittsburgh, PA

Invited Opening Keynote Speaker for American Society for Microbiology, Texas Branch Spring Meeting, “The Battleground of Sexual Reproduction: How Symbionts Selective Kill Animal Embryos”

Wolman Seminar Series, Johns Hopkins University, “The Battleground of Sexual Reproduction: How Phage Genes Selectively Kill Animal Embryos”, Baltimore, MD

Bhattacharjee Distinguished Lecturer, Miami University in Ohio, “The Human Microbiome Sciences Ignore Diversity”, Oxford, Ohio

Pennsylvania State University, Department of Food Science, "Lab Introductions and Microbiome Center Aspirations", University Park, PA

Pennsylvania State University College of Medicine, "Diversity, Equity, and Inclusion in the Microbiome Sciences" Hershey, PA

Pennsylvania State University Population Research Institute, Microbiome Center, "Introduction and Collaborative Research Aspirations Between Social and Microbiome Sciences", University Park, PA

Pennsylvania State University Microbiome Center, "Lab Introduction and Center Aspirations", University Park, PA

Pennsylvania State University Virology Group, "A New Penn State Symbiont", University Park, PA

University of New Mexico, Department of Biology "Species Formation Through the Lens of Functional Hologenomics", Alburquerque, NM

University of Alabama, Department of Biological Sciences, "Selfish Drive in a Global Endosymbiont: Genes and Mechanisms", Tuscaloosa, AL

University of Florida, Genetics Institute, "Symbionts versus Sexual Reproduction: The Battleground at the Root of an Animal Pandemic", Gainesville, FL

Vanderbilt University, Diabetes Research and Training Center, "The Importance of Diversity in the Human Microbiome Sciences" Nashville, TN

Invited speaker for Keystone Meeting on Gene Drives and Selfish Genetic Elements, Tahoe City, CA (cancelled due to COVID19)

Invited Keynote Speaker for Darwin Day, University of Southern Mississippi, Hattiesburg, MS (declined due to COVID19)

2021 Invited speaker for Keystone Meeting on Gene Drives and Selfish Genetic Elements, Whistler, BC, Canada (cancelled due to COVID19)

Monash University, Institute of Vector-Borne Diseases, World Mosquito Program, "Symbionts and Selfish Drives: The Genetics and Mechanisms of Cytoplasmic Incompatibility", Clayton VIC, Australia

U. Alabama, Department of Biological Sciences, "Selfish Drives in a Global Endosymbiont: Genes and Mechanisms", Tuscaloosa, AL,

Colorado State University, Department of Biology, "Hologenomic Speciation: The Million Year Journey for Wasps, Endosymbionts, and the Gut Microbiome", Fort Collins, CO

U. New Mexico, Department of Biology, "Species Formation Through the Lens of Functional Hologenomics" Albaquerque, NM

2020 University of California, Irvine, Center for Virus Research, "An Endosymbiotic Pandemic Spurred by Phage Genes that Selfishly Hijack Reproduction" Irvine, CA

National Science Foundation Biology Integration Institute, Genomics and Eco-evolution of Multi-scale Symbioses (GEMS), "Phages, Endosymbionts, and Selfish Drives: How to Hijack Animal Reproduction", Indiana University, University of Chicago, University of Illinois

Pennsylvania State University, Department of Entomology, "What Turned a Bacterial Endosymbiont into a Global Pandemic and Vector Control Strategy?", State College, PA

Annual Symposium for Digestive Disease Research Center: Gastrointestinal Infectious and Injury, Vanderbilt University, Nashville, TN (cancelled due to illness)

Invited speaker for Panel on Effects of Race and Ethnicity on Microbiome, Keystone Symposia on Inflammation, Microbiota and Cancer, Taipei, Taiwan (cancelled due to COVID19)

Premium Invitee, Course Hero Education Summit, Redwood City, CA (declined)

2019 Keynote lecture, University of Idaho Center for Health in the Human Ecosystem, "Bacteriophage, Bacteria, and Bugs: The Making of a Great Pandemic and Global Vector Control Strategy", Moscow, Idaho

National Science Foundation Microbiome Workshop, "Darwin's Blind Spot: Microbes and the Origin of Species", Alexandria, VA

University of South Florida, Department of Medicine, "The Microbial Worlds of Insect Vectors and Humans" Tampa, FL

Plenary lecture, Inaugural Purdue Microbiome Symposium, Purdue University, Beck Agricultural Center, West Lafayette, Indiana (full travel support)

Trainee Speaker, U. Wisconsin, NIH T32 Training Grant Trainee Speaker for "Microbes in Health and Disease", Madison, WI (full travel support)

Graduate Student Invited Speaker, U. Colorado, Microbiology, Anschutz Medical Campus, Aurora, CO (full travel support)

Vikki Monday Lectures, Faculty of Biological and Environmental Sciences, Organismal and Evolutionary Biology Research Program, Molecular and Integrative Biosciences Research Program, University of Helsinki, Finland (full travel support)

U. Minnesota, Department of Genetics, Cell Biology, and Development, Minneapolis, MN

Vanderbilt Genetics Institute Annual Symposium, "Diversity in the Human Microbiome: What are the Rules?", Vanderbilt University Medical Center, Nashville, TN

Keynote lecture, Carnegie Institution Embryology Postdoc Symposium, Topic on Biological Interactions, Washington, D.C., (declined due to travel conflict)

Keynote lecture, EMBO Conference on Molecular and Population Biology of Mosquitoes and Other Disease Vectors, Kolymbari, Crete, Greece (declined due to travel conflict)

2018 Plenary lecture, International Symbiosis Society Congress, The Mechanisms of Host-Microbiome Interactions, Oregon State University, Corvallis, Oregon USA

Keynote lecture, Suddath Symposium, The Chemical Ecology of Microbiome Interactions, "How Do Microbes Form Relationships with Animals?", Parker H. Petit Institute for Bioengineering and Bioscience, Georgia Institute of Technology, Atlanta, GA (full travel support)

Keynote lecture, 11th annual Arthropod Genomics Symposium, "The genetic basis of reproductive parasitism" Carl Woese Institute for Genomic Biology, University of Illinois, Urbana, IL (full travel support)

Conference organizer, 2018 International *Wolbachia* Conference, Salem, MA

59th annual *Drosophila* Research Conference, "Prophage WO Genes That Alter Sperm and Kill Males in *Drosophila*" Evolution and Population Genetics, Platform talk, Philadelphia, PA

Conference organizer, symposium convener and lecturer, Medicine and Evolution in Light of the Microbiome, 4th annual International Society for Evolution, Medicine, and Public Health, "Gut Microbiota Diversity Across Ethnicities in the United States" Park City, Utah (partial travel support)

University of Chicago, Committee on Microbiology Seminar Series, Department of Biomedical Sciences, Chicago, IL (full travel support)

Vanderbilt Genetics Institute Seminar Series, "How Do Microbes Form Relationships with Animals?" Vanderbilt University Medical Center, Nashville, TN

Keynote lecture, European Society for Evolutionary Biology Progress Meeting 2018, Topic on the Microbiome and Geographic Mosaic of Coevolution, Bruges, Belgium, (declined due to teaching conflict)

Asia-Hub program/workshop at Nanjing Agricultural University, topic on insect symbionts and agricultural pest control, Nanjing, Jiangsu Province, China (declined due to travel conflict)

2017

Plenary lecture, Plant and Animal Genomes XXV Conference, "Microbes and the Origin of Animal Species" San Diego, CA (full travel support)

Symposium convener and lecturer, American Society for Microbiology - Microbe 2017, Symposium on Microbiome and Coevolution, "Evolution of Host-Microbiome Associations Across the Animal Kingdom" New Orleans, LA (partial travel support)

Keynote lecture, European Society for Evolutionary Biology 2017, "On the Origin of Species: From Genes to Holobionts", Symposium on Coevolution of Hosts and Their Microbiomes, Groningen, Netherlands

UC Berkeley, "Animal Speciation from the Microbe's Perspective", Department of Integrative Biology, Berkeley, CA (full travel support)

University of Alabama, "On the Origin of Animal Species in Light of Symbiosis", Birmingham, AL (full travel support)

University of Mississippi, “The Microbial Basis of Animal Speciation”, Oxford, MS (full travel support)

Vanderbilt Genetics Institute Seminar Series, “How Do Microbes Form Relationships with Animals?”, Vanderbilt University, Nashville, TN

Austin Pea University, “Microbes and the Origin of Animal Species”. Department of Biology, Clarksville, TN

Plenary lecture, International Conference on Holobionts, Natural History Museum, Paris, France (full travel support; declined due to conflict with teaching)

Keynote lecture, Systems Biology Workshop, AgriBio, Centre for AgriBioscience, La Trobe University, Melbourne, Victoria 3083, Australia (partial travel support, declined due to substantial travel schedule)

Special speaker on host-microbe-virus interactions, Gordon Research Conference on Malaria, Diablerets, Switzerland (full travel support, declined due to travel conflict)

Research Workshop: The Metaorganism Frontier, King Abdullah University of Science and Technology, Thuwal, Red Sea, Saudi Arabia (full travel support, declined due to travel conflict)

Colloquium Series on the Microbiome, Integrative Research Institute, Humboldt University, Charite-University Hospital, Max Delbruck Center, Berlin, Germany (full travel support, declined due to teaching conflict)

New Frontiers Symposium on Microbiome, Radbound Institute for Molecular Sciences, Netherlands (full travel support, declined due to teaching conflict)

Workshop on Host-Microorganism Associations, University of Bordeaux, CNRS, France (full travel support, declined due to travel conflict)

2016 Plenary lecture, EMBO Conference on the Viruses of Microbes, International Society for Viruses of Microorganisms, Liverpool, UK (partial travel support)

Plenary lecture, German Zoological Society 109th annual meeting, Kiel University, "Darwin's Blind Spot: The Microbial Making Of A Species", Kiel, Germany (full travel support)

Keynote lecture, Microbiome Meeting, Centro de Ciencias de la Complejidad, Mexico City, Mexico (full travel support)

Evolution lecture, University of British Columbia, Biodiversity Research Center, Invitee of the life science graduate students, "Animal-Microbe Interactions and the Origin of Species" (full travel support)

Keynote lecture, American Society for Microbiology Conference for Undergraduate Education, "Host Biology in Light of the Microbiome: An Introduction to Holobionts and their Hologenomes" North Bethesda, MD (partial travel support)

University of Liverpool, "Bug in a Bug in a Bug: How a Virus in an Obligate Intracellular Bacterium Affects Eukaryotes" Liverpool, UK (partial travel support)

University of North Carolina at Charlotte, "The Hologenome Concept: Host Biology In Light of the Microbiome", Department of Biological Sciences, Charlotte, NC (full travel support)

Plenary lecture, International Society for Evolution, Medicine, & Public Health, 2nd annual conference, Triangle Center for Evolutionary Medicine, Duke University, NC (full travel support, declined due to scheduling conflict)

Plenary lecture, 2nd Summer Symposium on Systems Biology, National Institute of Medical Genomes, INMEGEN, Mexico City, Mexico (full travel support, declined due to teaching conflict)

Keynote lecture, American Society for Microbiology Meeting on Beneficial Microbes, 6th conference, Seattle, WA (partial travel support, declined due to scheduling conflict)

Podium talk, Gordon Research Conference on Marine Microbes, Session on Host-Associated Microbiome Communities, Gorina, Spain (partial travel support, declined due to scheduling conflict)

Microbiome and Host Metabolism, Symposium at The Academy Palace of Sciences in Brussels, Belgium (declined due to scheduling conflict)

University of Louisville, Microbiology and Immunology Student Organization, Louisville, KY (declined due to teaching conflict)

2015

Keynote lecture, American Society for Microbiology Meeting, New Orleans, LA, "Phage Wormholes: Hacking Symbiosis to Scatter across the Tree of Life" (partial travel support)

Plenary lecture, 11th Early Career Scientists Symposium, University of Michigan, Department of Ecology and Evolutionary Biology, "The Microbiome and Darwin's Mystery of Mysteries", Ann Arbor, MI (full travel support)

Symposium convener, "Holobionts and Their Hologenomes", 115th American Society for Microbiology General Meeting, New Orleans, LA (partial travel support)

Podium talk, Gordon Research Conference on Microbial Population Biology, Proctor Academy, NH (partial travel support)

Podium talk, Gordon Research Conference on Animal-Microbe Symbioses, Waterville Valley, NH (partial travel support)

Keynote lecture, Evergreen International Phage Meeting, "Phages in Obligate Intracellular Bacteria", Olympia, WA (no travel support)

North Carolina State University, "Phage Wormholes: Hacking Symbiosis to Dwell in the Bacterial and Eukaryotic Worlds", Department of Plant and Microbial Biology, Raleigh, NC (full travel support)

University of Alaska, "The Symbiotic Basis of Animal Speciation", Department of Biology and Wildlife, Fairbanks, AK (full travel support)

National Institute for Mathematical and Biological Synthesis, University of Tennessee, Computational Advances in Microbiome Research Workshop, Knoxville, TN (full travel support)

University of Pittsburgh, Department of Medicine. "Host Biology in Light of the Microbiome" Pittsburgh, PA (full travel support)

San Diego State University, Department of Biology, "Symbiosis, Evolution, and Biology's Innate Complexity" San Diego, CA (full travel support)

University of Tennessee, Department of Microbiology. "Microbes and the Origin of Species", Knoxville, TN (full travel support)

Arizona State University, Center for Evolution and Medicine, "The Microbiome and Darwin's Mystery of Mysteries", Tempe, AZ (full travel support)

Eastern Tennessee State University, Department of Biological Sciences, "Microbes and the Origin of Species", Johnson City, TN (full travel support)

2014 Plenary lecture, Dalhousie University, Evolutionary Genomics of Symbiosis Workshop "The Urge to Merge: Towards a Unified Theory of The Origin of Species" Halifax, Nova Scotia, Canada (full travel support)

Plenary lecture, National Evolutionary Synthesis Center, catalysis meeting for Evolution and Community Ecology of Host Associated Microbiota, "10 Principles of the Hologenome", Durham, NC (full travel support)

Western Kentucky State University, "The Entangled Bank in Animals: Virus Transfer Between Bacterial Symbionts", Bowling Green, KY (full travel support)

Vanderbilt Univ, Human Genetics , "Rethinking Animal Evolution and Genetics in Light of the Microbiome", Nashville, TN

University of Utah, Department of Biology Super Seminar, "The Microbiology of Animal Speciation", Salt Lake City, UT (full travel support)

Bridgewater State University, Discover the Microbes Within! The *Wolbachia* Project, two lectures, Bridgewater, MA (full travel support)

Session Chair, 8th International *Wolbachia* Conference, "Speciation by Symbiosis: What Have We Learned So Far?", Innsbruck, Austria (no travel support)

Keynote lecture, Multilevel Selection Workshop, "Darwin's Blind Spot: The Microbial Making Of A Species" University of Munster, Germany (full travel support)

University of Kiel, Zoological Institute, "The Hologenome Concept of Evolution", Kiel, Germany (full travel support)

Finalist, Howard Hughes Medical Institute Professors Competition, "Next Generation Flipped Courses: Active Learning With A Three Fold Advantage", Chevy Chase, MD (full travel support)

University of Illinois, Department of Biological Sciences, "Darwin's Blind Spot: The Microbial Making of a Species", Chicago, IL (full travel support)

Vanderbilt University, Digestive Disease Research Center, "Darwin's Blind Spot: The Microbial Making of Animals", Nashville, TN

Michigan State University, Department of Microbiology and Molecular Genetics, "An Evolutionary Framework for Microbial Pathogenesis", East Lansing, MI (full travel support)

University of Michigan, Department of Microbiology and Immunology, "Life Looks for Life: Underexplored Dimensions of the Microbiome" Ann Arbor, MI (full travel support)

Vanderbilt University, Department of Medicine, Dinner and Data "Darwin's Blind Spot: The Microbial Making of a Species" Nashville, TN

Vanderbilt University, Digestive Disease Research Center, Microbial-Host Interactions, "Animal Microbes and the Origin of Species", Nashville, TN

2013 Session chair and speaker, Evolution Society Meeting, "Animal Speciation and the Gut Microbiome", Snowbird, UT (full travel support)

- Featured in *Science News*, July 2, 2013, Gut microbes may put barrier between species

University of Illinois, Department of Animal Biology, "Symbionts as Targets and Agents of Change", Urbana-Champaign, IL (full travel support)

University of Oregon, Department of Biology, "Mainlining the Hologenome into Biology", Eugene, OR (full travel support)

University of Indiana, Department of Biology, "Mainlining the Hologenome into Biology", Bloomington, IN (full travel support)

San Diego State University, Department of Biology, "Mainlining the Hologenome into Biology", San Diego, CA (full travel support)

Plenary lecture, National Science Foundation, Dimensions of Biodiversity PI Meeting, "The Underexplored Dimensions of Speciation Symbionts" (grant travel support)

2012 University of Idaho, Department of Biological Sciences, "Symbionts as Targets and Agents of Change" Moscow, Idaho (full travel support)

7th International Symbiosis Society Conference, Symposium Session on Horizontal Gene Transfer and the Role of Viruses, "The Entangled Bank in Animals: Viral Transfer Between Bacterial Symbionts", Krakow, Poland (no travel support)

Advances in Genome Biology and Technology Conference, Microbial Genomics session, "Targeted Genome Capture of Microbial Symbionts", Marco Island, FL (no travel support)

Vanderbilt University Medical Center, Department of Pathology, Microbiology, and Immunology, "Virus Evolution in Host-Restricted Bacteria", Nashville, TN

North Central Branch of the Entomological Society of America, Student Affairs Committee invitation for symposium, "Odd Couples: Symbioses in Insects and Their Consequences", Lincoln, NE, Declined due to conflict

Murray State University, Department of Biology, "Speciation by Symbiosis", Murray, KY (no travel support)

2011 Georgia Institute of Technology, Department of Biology, "The Entangled Bank in Animals: Gene Transfer Between Bacterial Symbionts", Atlanta, GA (full travel support)

Vanderbilt University Medical Center, Department of Pediatrics, Pediatric Infectious Disease Research Conference, "Evolutionary and Ecological Genomics of Intracellular Bacteria", Nashville, TN

University of Vienna, Austria, Lecture Series on Symbiosis, "Horizontal Gene Transfer Between Intracellular Bacteria" (full travel support)

Keynote lecture, American Society for Microbiology Conference, Session on Coevolution, "The Entangled Bank Within Eukaryotes: Bacteriophage in Bacterial Endosymbionts" New Orleans, LA (partial travel support).

Graduate student invitation, Emory University, Population Biology, Ecology, and Evolution graduate program, "Horizontal Gene Transfer Between Intracellular Bacteria in Animals", Atlanta, GA (full financial support)

2010 Keynote speaker, 8th Ecological Genomics Symposium, "Microbial Symbiosis and Mobile Genetic Elements", Kansas City, MO (full travel support)

Distinguished lecturer, Symposium series presented by the students of the Case Western Reserve University Cellular and Molecular Biology Training Program, "Symbiotic Control of Human Diseases" and "Mobile Elements in Obligate Intracellular Bacteria" (full travel support)

Keynote speaker, EU COST Action meeting - Arthropod symbiosis: From basic research to pest and disease management, "The *Wolbachia*-Invertebrate Symbiosis as a Platform for Integrative Education", Zurich, Switzerland (full travel support)

Keynote speaker, 7th Okazaki Biology Conference on Evolution of Symbiotic Systems, "The Entangled Bank of an Intracellular Symbiosis: Mobile Genetic Elements in *Wolbachia*" National Institute for Basic Biology, Kakegawa, Japan (full travel support)

Keynote speaker, International symposium on Microbial Interactions Leading to Novel Biological Functions, "Nature's Matryoshka Doll: Bacteriophage in Bacterial Endosymbionts of Eukaryotes", Tsukuba, Japan (full travel support)

2009 University of Arizona, Department of Entomology, "Mobile DNA in Bacterial Symbionts", Tucson, AZ (full travel support)

Vanderbilt University Medical Center, Department of Microbiology and Immunology, "Mobile Elements in Symbiotic Bacteria", Nashville, TN

1st Nematode-Bacterium Symbioses Research Coordination Network Meeting, "Phylogenomics of Parasitism and Mutualism in *Wolbachia*", University of Wisconsin, Madison, WI (partial travel support)

Session chair and speaker, International Symbiosis Society Meeting, "Mobile DNA in Symbiotic Bacteria", Madison, WI (partial travel support)

Keynote lecture, Invited workshop director/speaker for HHMI high school lab series "Discover the Microbes Within! The Wolbachia Project", Marine Biological Laboratory, Woods Hole, MA (full travel support)

Nasonia Genome Meeting, "The Genetic basis of Symbiont titers in *Nasonia*", University of Rochester, Rochester, NY

2008 Keynote lecture, The National Conference on Science, Technology, Education, and Math, "Discover the Microbes Within! The *Wolbachia* Project", University of Maine, Orono, ME

Keynote lecture, HHMI workshop, "Discover the Microbes Within! The *Wolbachia* Project", University of Mississippi, Jackson, MS (full travel support)

4th International *Wolbachia* Conference, "Phylogenomics of *Wolbachia*: What the Trees Can and Can Not Say", Crete, Greece

Keynote lecture, Falmouth Hospital Lecture Series, "The Use of Invertebrate Symbionts to Control Human Disease", Falmouth, MA 02536 (stipend support)

Vanderbilt University, "Bacteriophage, Bacteria, and Bugs: The Evolution of a Widespread Tripartite Symbiosis", Department of Biological Sciences, Nashville, TN

NSF Workshop, "The Future of the Tree of Life Program", Washington DC (full travel support)

SOCIETIES

American Academy of Arts and Science
American Society for Microbiology (est. 2004, Academy Membership est. 2021)
Applied Microbiology International (est. 2024)
Genetics Society of America
International Society for Microbial Ecology (est. 2025)
International Society for Viruses of Microorganisms
International Symbiosis Society
Society for the Study of Evolution (lifetime member)

TEACHING-RELATED ACTIVITIES

Courses/sections introduced or currently being taught at Vanderbilt University

- Biological Sciences 1510 – Introduction to Biological Sciences, Role: Instructor (50%), 3 cr. This introductory course is foundational for all biological sciences courses and majors. Material in this section covers cell diversity and evolution, synthesis of macromolecules, membrane-bound organelles, metabolism and energy production. Fall 2017: 191 students, Fall 2018: 230 students, Fall 2019: 186 students
- Biological Sciences 234/3234 – Microbiology, Role: Instructor (100%), 3 cr. This course brings microbiology to the curricula of the Department of Biological Sciences. It covers the origin and universality of microbial life, microbial diversity, microbial genomics, and human health. Spring 2010: 16 students, Spring 2011: 10 students,

Spring 2012: 43 students, Spring 2014: 48 students, Spring 2015: 46 students, Spring 2016: 45 students, Spring 2017: 45 students

- Biological Sciences 275/3695 - Living In Symbiosis, Undergraduate Seminar, Instructor (100%), 2 cr. This seminar style course teaches execution in science by reading, observing, and discussing research and methods. The conceptual focus is on the molecular, evolutionary, biochemical, and systems biology of symbioses. Fall 2010: 12 students, Fall 2011: 13 students, Fall 2014: 11 students, Fall 2015: 13 students
- Biological Sciences 3961 - Independent Laboratory Research (100%), variable student credits. This research-based course culminates in research seminars and reports. Fall 2019: 53 students.
- Foundations in Microbiology and Immunology 332 – Microbial Genetics and Pathogenesis, Instructor for two 90 minute lectures (100%). This course is designed for graduate students interested in microbial genetics and pathogenesis. Course directors are Profs. Lacy and Cover in Department of Pathology, Microbiology, and Immunology. Summers 2012, 2013, 2014, 2015: 10-12 students. Spring 2016: 15 students
- Interdisciplinary Graduate Program 300 - Bioregulation, Genetics Section, Instructor (100%) for three 60 minute lectures on next generation sequencing, microbial genomics, and the human microbiome. It also includes one help session. Bioregulation is a lecture style course for 1st year graduate students in the Biomedical Sciences. Fall 2011 and Fall 2012: 90 students
- Microbiology and Immunology 8335 – Scientific Writing, 2 cr. Instructor/Mentor for two second year graduate students writing their F31 proposals. Spring 2019

Other courses taught at Vanderbilt University

- Biological Sciences 280/3860 – Research Internship. Mentor in Spring 2009 (1 student), Fall 2010 (1 student), Spring 2011 (1 student), Fall 2011 (1 student), Fall 2012 (1 student), 2020 (1 student)
- Biological Sciences 283/3861 – Directed Laboratory Research. Mentor in Fall 2009 (1 student), Spring 2010 (2 students), Summer 2010 (1 student), Spring 2011 (2 students), Fall 2011 (1 student), Spring 2013 (1 student), Summer 2014 (2 students), Fall 2013 (2 students), Spring 2016 (2 students), Fall 2017 (2 students), Spring 2018 (1 students), Spring 2019 (1 student), Fall 2019 (2 students), Spring 2020 (2 students), Fall 2020 (1 student)
- Biological Sciences 286/3961 – Independent Laboratory Research. Mentor in Fall 2009 (1 student), Fall 2010 (1 student), Spring 2010 (2 students), Fall 2011 (1 student), Spring 2012 (1 student), Fall 2012 (1 student), Spring 2014 (2 students), Fall 2014 (1 student), Spring 2015 (1 student), Fall 2017 (1 student), Spring 2018 (1 student), Fall 2018 (1 student), Spring 2019 (1 student), Fall 2019 (1 student), Spring 2020 (2 students), Fall 2020 (2 students)
- Biological Sciences 296/4999 - Honors in Biological Sciences in 2009 (2 students), 2010 (1 student), 2011 (1 student), 2012 (1 student; 6 cr), 2013 (3 students), 2015 (1 student), 2018 (1 student)
- Biological Sciences 3850 - Independent Reading. Mentor in Fall 2015 (1 student)

- Biological Sciences 110B/1511 – Introduction to Biological Sciences, Guest lecture on Coevolution, Fall 2011 (260 students), Primary Instructor – Prof. Abbot
- Biological Sciences 205/2205 – Evolution, Instructor for two 75 min lectures. Fall 2010 (60 students) Primary Instructors – Profs. Funk and Rokas
- Biological Sciences 275/3965 – Cell Biology: Vector Biology and Global Health, Guest lecture on symbiont-control of insect vectors, Spring 2008, 2010, 2011 (12 students). Primary Instructor – Prof. Zweibel.
- Biological Sciences 275/3965 – Biology of Host-Parasite Interactions, Guest lecture on symbiont-control of insect vectors, Spring 2008 (8 students). Primary Instructor – Prof. Zweibel.
- Biological Sciences 320/6320 – Graduate Seminar in Biological Sciences, Instructor (100%). This entry-level course for graduate students brings the first and second year students of the Biological Science Department together for a journal club in which students read, critique, discuss, and present the course readings. Spring 2009: 23 students, Spring 2020: 17 students
- Biological Sciences 336 – Seminar in Ecology and Evolutionary Biology, Instructor (100%). This course is designed for graduate students with an interest in the patterns and processes of ecology and evolution. This seminar style course fosters pedagogical interactions between the faculty and students on a weekly basis. Spring 2009 and Fall 2011.

Graduate student dissertation committees from the Bordenstein Lab

(i) Graduate students directly advised by SRB (awards and leadership in bulleted list)

Brucker, Rob 2008 – 2013 Dept. of Bio. Sci. Vanderbilt University

- Ann Bernard Martin Award for Excellence in Graduate Research, 2010
- Hickory Stick Award for Outstanding Teaching in Biological Sciences, 2011
- Graduate Student Association Vice President, BSCI, 2010-2014
- Volunteer for numerous BSCI recruitment weekends
- Junior Fellow at Harvard University's Rowland Institute, Cambridge, MA

Metcalf, Jason 2011 – 2014 Dept. of Bio. Sci. Vanderbilt MSTP

- M.D./Ph.D. Student in Medical Scientist Training Program
- Ann Bernard Martin Award for Excellence in Graduate Research, 2012
- Richard B. Johnston, Jr. Award for excellence in academic scholarship and clinical medicine, 2016
- Graduate Student Association Social Chair, BSCI, 2011-2012
- Graduate Student Association Vice President, BSCI, 2012-2013
- Graduate Student Association President, BSCI, 2013-2014
- Communications Director, Vand. Microbes & Defense Society, 2012-2013
- Tutorial Coordinator, Vanderbilt Microbes & Defense Society, 2011-2012
- Resident in Pediatrics, University of Michigan

Funkhouser, Lisa 2009 – 2016 Dept. of Bio. Sci. Vanderbilt University

- NSF Graduate Research Fellowship, 2011

- Ann Bernard Martin Award for Excellence in Graduate Research, 2011
- Vanderbilt Prize Scholar - university wide competition for best female graduate student in biomedical sciences, 2013
- Graduate Student Association Social Chair, BSCI, 2010-2012
- Graduate Student Association President, BSCI, 2012-2013
- Vanderbilt Student Volunteers for Science, BSCI, Fall 2012
- Currently Postdoctoral Fellow in David Sibley's lab at Washington University in St. Louis

LePage, Daniel 2012 – 2016 Dept. of Bio. Sci. Vanderbilt University

- NSF Doctoral Dissteration Improvement Grant
- Best Seminar Award, International *Wolbachia* Conference, Australia, 2016
- Graduate Student Association Treasurer, BSCI, 2012-2014
- Graduate Student Association President, BSCI, 2014-2015
- Volunteer for numerous IGP and BSCI recruitment weekends
- Currently Quality Manager / Microbiologist at Creature Comforts, Athens, GA

Van Opstal, Edward 2013 – 2018 Dept. of Bio. Sci. Vanderbilt University

- American Society for Microbiology Young Ambassador to Tennessee, 2018
- AAAS General Meeting Student ePoster, Honorable Mention (runner up), 2018, Austin, TX
- ASM Microbe Seminar Slot in Eco-Evolution Session, Outstanding Student Abstract Award, Seminar Slot in Up-Goer Five Session and Travel Award, New Orleans, 2017
- Selected attendee of the Vanderbilt DC Policy Trip, 10/2016
- Selected author in NIH BEST PhD/Postdoc Blog Series, 3/2017-8/2017
- Graduate Student Association Treasurer, BSCI, 2014-2015
- Graduate Student Association Vice President, BSCI, 2015-2016
- Graduate Student Association President, 2016-2017
- Coordinator for Life Science Tennessee (Middle TN) Academic Alliance Beer and Biotechnology, 2016-2017
- Inequality in the Biosciences Association, Speaker Chair, 201-2020
- Graduate Research Excellence Award, BSCI, 2018

Brooks, Andrew 2013 – 2019 Human Genetics Vanderbilt University

- Vanderbilt Genetics Institute Training Grant, 2015-2018
- Human Genetics Student Association, Vice President, 2015-2016
- Human Genetics Student Association, President, 2016-2017
- ASM Microbe 2017 Speaker in Electronic Poster Session, Travel Award for Outstanding Abstract and Two Poster Presentations, New Orleans
- Organizer of Life Sciences Tennessee Academic Alliance - Beer and Biotech Events, 2018
- VI4 Mini-Sabbatical Award Recipient, $4000 research collaboration, 2018
- Vanderbilt Genetics Institute Best Genetics Interest Group Presentation, The Golden Microphone Award, 2019

Perlmutter, Jessamyn 2015 – 2020 Dept. of Bio. Sci. Vanderbilt University

- Graduate Student Association Treasurer, BSCI, 2015-2016
- Best Poster Award, 9th International *Wolbachia* Conference, Australia, 2016
- Inequality in the Biosciences Associations, 2016-2020, Director of Outreach
- Instructor for Discover the Microbes Within! The *Wolbachia* Project lab series
- Richard and Mary Finkelstein Student Travel Award, American Society for Microbiology Meeting, 2018, One of six student attendees at the conference to receive the award
- President, Co-Founder, Vanderbilt University Student Branch of American Society for Microbiology, 2018
- Top Speaker Award at American Society for Microbiology KY/TN local branch meeting, 2018
- Margaret Cuninggim Women's Center Leadership Award for a student who demonstrates leadership in activities that contribute to the achievements, interests, and goals of women or that promote gender equity, Vanderbilt University, 2019
- 3 Minute Thesis Finalist, Runner Up, Vanderbilt Univ. Graduate School, 2019
- Russell G. Hamilton Graduate Leadership Development Institute Dissertation Enhancement Grant, $1,890, 2019
- Best Seminar Presentation Award at the 2nd International Holobiont Conference, 2019, Montreal, Canada
- Vanderbilt Biomedical Research and Education Training Business Pitch Award, 2nd place team award, 2019
- National Institutes of Health F31 Ruth L. Kirschstein Predoctoral Individual National Research Service Award, 2019-2020

Shropshire, Dylan 2015 – 2020 Dept. of Bio. Sci. Vanderbilt University

- NSF Graduate Research Fellowship, Honorable Mention, 2016
- NSF Graduate Research Fellowship, Recipient, 2017
- Ann Bernard Martin Award for Excellence in Graduate Research, BSCI, 2017
- Graduate Student Association Treasurer, BSCI, 2016-2017
- Top Speaker Award at American Society for Microbiology KY/TN local branch meeting, 2018
- 1st Place Award for Microbiology Student Oral Presentation, Tennessee Academy of Science, 2018
- 1st Place Award for Student Ten-Minute Paper Competition Information, Entomological Society of America, 2019 Southeastern Branch Meeting
- Travel award for Gordon Research Seminar on Undergraduate Biology Education Research and Animal-Microbe Symbiosis, 2019
- Runner-up for Larry Sandler Award, Genetics Society of America

Markowitz, Rob 2019 – 2022 Dept. of Bio. Sci. Vanderbilt University

- NIH T32 Big Data Training Grant Trainee in Biomedical Sciences
- Vanderbilt Microbiome Initiative Research Specialist

- 2021-2022 Vanderbilt Ingram Cancer Center Transformative Cancer Research Funding, "The Genome-Microbiome-Cancer Triad", $15,819 (total costs), $10,000 (direct costs), $5,819 (indirect costs)
- Now Principal Scientist at The Estee Lauder Companies, Inc.

Buchser, Jessica 2024 – Current Dept. of Biology Penn State University
- USDA NIFA Training Grant Graduate Fellowship in Animal Reproductive Microbiomes

(ii) Graduate students for which SRB serves on or chairs the thesis committee

Choudhury, Ray	2007 – 2011	Dept. of Biology	Univ. of Rochester
Erickson, Daniel	2009 – 2011	Dept. of Bio. Sci.	Vanderbilt University
Gibbons, John	2009 – 2012	Dept. of Bio. Sci.	Vanderbilt University
King, Jonas	2009 – 2012	Dept. of Bio. Sci.	Vanderbilt University
Shaffer, Carrie	2009 – 2012	Dept. of Micro & Im.	Vanderbilt University
Salichos, Leonidas	2010 – 2014	Dept. of Bio. Sci.	Vanderbilt University
Ma, Peijun	2010 – 2014	Dept. of Bio. Sci.	Vanderbilt University
Beachboard, Dia	2010 – 2014	Dept. of Micro & Im.	Vanderbilt University
Haley, Kathryn	2010 – 2014	Dept. of Micro & Im.	Vanderbilt University
Cobbs, Cassidy	2011 – 2014	Dept. of Bio. Sci.	Vanderbilt University
Colby, Greg	2011 – 2012	Dept. of Bio. Sci.	Vanderbilt University
Belovich, Andrea	2013 – 2016	Dept. of Pharmacol.	Vanderbilt University
Sigle, Leah	2015 – 2018	Dept. of Bio. Sci.	Vanderbilt University
Carrier, Tyler	2016 – 2020	Dept. of Bio. Sci.	UNC at Charlotte
Gitschlag, Bryan	2016 – 2022	Dept. of Bio. Sci.	Vanderbilt University
• Chair			
Graepel, Kevin	2016 – 2019	Dept. of Pediatrics	Vanderbilt U Med Ctr
Hahn, Megan	2018 – 2020	Marine & Atmosph. Sci	Stony Brook Uni.
Joosse, Bryan	2018 – 2019	Dept. of Bio. Sci.	Vanderbilt University
• Chair			
Critchlow, Justin	2019 – 2022	Dept. of Bio. Sci.	Vanderbilt University
Strickland, Britton	2019 – 2023	Dept. of Medicine	Vanderbilt University
Green, Hamilton	2020 –	Dept. of PMI	Vanderbilt U Med Ctr
Meier, Cole	2021 – 2022	Dept. of Bio. Sci.	Vanderbilt University
• Chair			
Munneke, Matt	2021 –	Dept. of PMI	Vanderbilt U Med Ctr
Miller, Jeanette	2021 –	Dept. of PMI	Vanderbilt U Med Ctr
• Chair			
Stone, Carl	2021 – 2022	Dept. of Bio. Sci	Vanderbilt University
Boville, Elizabeth	2022 –	Dept. of Biology	Penn State University
Krizek, Rachel	2023 –	Dept. of BMMB	Penn State University
Huntley, Naomi	2023 –	Dept. of Biology	Penn State University
• Chair			
Puetz, Lara	2023 –	Globe Institute	Univ. of Copenhagen
Ser, Suk Lan	2023 –	Dept. of Biology	Penn State University
Harkinson, Quinn	2024 –	Dept. of Entomology	Penn State University

Ramirez, Luis	2024 –	Dept. of Biology	Penn State University
Chao, Jasper	2024 –	Dept. of Biology	Penn State University
• Chair			
Connolly, Shane	2025 –	Dept. of Bioch & Mol Bio	Penn State University
Alharbi, Shorooq	2025 –	Dept. of Entomology	Penn State University

Advisor for Postdocs (awards in bullets)

Newton, Irene	2008-2011	Assistant Prof.	Indiana Univ, Bloomington

- Postdoctoral Fellow of National Science Foundation
- Woodrow Wilson Career Enhancement Fellowship

Kent, Bethany	2008-2010	Clinical Lab Scientist	Centennial Hospital
Jernigan, Kristin	2010-2013	Assistant Prof.	Columbia State Comm. Coll.
Brucker, Robert	2013-2014	Junior Fellow	Harvard Rowland Institute
Kohl, Kevin	2014-2017	Assistant Prof.	Univ. of Pittsburgh

- Postdoctoral Fellow on NIH Gastroenterology Training Grant T32DK007663, Vanderbilt University, 11/1/16 - 10/31/17, PI of T32: Dr. Richard Peek
- International Postdoc Fellow of National Science Foundation, 2014-2016
- Honorable Mention, Postdoc of the Year Award, Vanderbilt University, 2017
- Assistant Professor, U. Pittsburgh, Dept. of Biological Sciences, 2017

Funkhouser-Jones, L.	2016-2016	Postdoc	Washington U. St. Louis
Mikaelyan, Aram	2016-2018	Assistant Prof.	NC State University

- German Research Foundation Postdoctoral Fellowship, DFG, 2017

Leigh, Brittany	2017-2021	Account Executive	LifeSci Communications

- NIH F32 NRSA Postdoc Fellow, 2017-2021, Vanderbilt University

Van Opstal, Teddy	2018-2019	Lead Scientist	Booz Allen Hamilton
Li, Junhui	2019-2020	Senior Postdoc	Cork University
Cross, Karissa	2019-2022	Account Executive	LifeSci Communications

- National Science Foundation Postdoctoral Fellowship in Biology, 2021-2022

Mallott, Elizabeth	2020-2022	Postdoc	Vanderbilt University
Kaur, Rupinder	2019-2022	Postdoc	Vanderbilt University
Imchen, Madangchanok	2022-2025	Postdoc	Penn State University
Finks, Sarai	2022-2024	Postdoc	Penn State University
Van Syoc, Emily	2023-2025	Postdoc	Penn State University

- Center for Human Evolution and Diversity, Penn State University, Seed Grant Award, "Heritability of the human gut mycobiome", 2024, $5350
- NIH NIDDK F32 Ruth L. Kirschstein Postdoctoral Fellowship, 2025-2028, $230,868
- NSF Postdoctoral Research Fellowship, declined due to NIH F32 award

Advisor for Research Professors (awards in bullets)

Kaur, Rupinder	2022-2025	Assistant Res. Prof.	Vanderbilt/Penn State

- Venus International Foundation, Young Researcher in Biology
- Highlighted article on *PLOS Biology* front page, June, 2022
- Started the Kaur Lab at The University of Illinois in Chicago

Lefoulon, Emilie	2023-Current	Assistant Res. Prof.	Penn State University

Yakhnina, Anastasiya 2025-Current Assistant Res. Prof. Penn State University

Scholarly & Career Advisory Committees for Clinical Fellows, Postdocs, Professors

Romano-Keeler, J. 2010 – 2012 Neonatology Vand. Children's Hospital
Smith, Clint 2011 – 2013 Pediatric Inf. Disease Vand. Univ. Medical Center
Newton, Irene 2013 – 2015 Biology Indiana Univ., Bloomington

- Woodrow Wilson Career Enhancement Fellowship for Minority Junior Faculty

Drown, Devin 2016 – 2016 Biology & Wildlife University of Alaska
Waterhouse, Stephanie 2018 – 2020, Pediatric Care Fellow Vand. Univ. Med Center
Byndloss, Mariana 2019 – Current, Pathology, Micro, Imm. Vand. Univ. Med Center
Reed, Floyd 2019 – 2020, NIH COBRE Award, University of Hawaii
Sesandra, Raj 2020 – Current, Medicine, Infectious Disease, Vand. U. Med Ctr.
Carter, Angela 2021 – Current, Instructor, University of Alabama at Birmingham
Chioma, Ozioma 2021 – Current, Research Instructor, Infectious Disease, VUMC

Graduate Program Member at Pennsylvania State University

Departments of Biology and Entomology, 2022 – Current
Molecular, Cellular, and Integrative Biosciences, 2022 – Current
Bioinformatics and Genomics Interdisciplinary Program, 2022 – Current
MD/PhD Program, College of Medicine, 2022 – Current

Training grant preceptor for:

(i) Reproductive Biology: Training for the 21st Century ($271,361 in direct costs), PI: Kevin Osteen, 2009-2011, Postdoc support, Dr. Kristin Jernigan, Vanderbilt University

(ii) Training Program in Cellular, Biochemical and Molecular Sciences | NIH T32 GM008554, PI: Dr. Jim Patton 2010 - 2022, PhD students Lisa Funkhouser and Daniel LePage, Vanderbilt University

(iii) Medical Scientist Training Program, NIH T32 GM0734, PI: Dr. Terence Dermody, 2011-2022, 2011-2014 MD/PhD student Jason Metcalf, Vanderbilt University

(iv) Cellular & Molecular Microbiology Training Program ($353,294 in direct costs), PI: Dr. Eric Skaar, 2011 - 2014, Department of Microbiology and Immunology, Vanderbilt University

(v) Preventing Prematurity and Poor Pregnancy Outcomes Training Grant, National Institute of Child Health and Development, PI: Dr. Jeff Reese, Vanderbilt University

(vi) Training Program on Genetic Variation and Human Phenotypes, Vanderbilt Genetics Institute, PI: Nancy Cox, 2014-2017, PhD student Andrew Brooks, Vanderbilt University

Undergraduate research projects supervised (honors/awards listed in bullets) at Vanderbilt University

(i) Undergraduates directly advised by SRB (S: Spring semester, F: Fall, Su: Summer)

1. Carolyn Foley Class of 2011 Su/2009
2. Ross Tollkansen Class of 2011 Su/2009
3. John Chen Class of 2012 S&F/2008, S&F/2009, S/2010
   - Coauthor on publication in *Genetics*, 2011
   - Awarded a Vanderbilt Undergraduate Summer Research Fellowship, 2010
   - Awarded Early Entry in Vanderbilt University Medical School, start in 2012
4. Aaron Noll Class of 2012 S&Su/2010
   - Vanderbilt University Medical School, start in 2012
   - Coauthor on publication in *BMC Evolutionary Biology*, 2017
5. Marisa Pinchas Class of 2012 S&F/2011, S&F/2012
   - Coauthor on publication in *BMC Evolutionary Biology*, 2017
6. Zhongyang Cao Class of 2013 F/2009, S/2010
7. Jonathan Herrick Class of 2013 F/2011
8. Emma Steigerwald Class of 2013 F/2012
   - Awarded Michael B. Keegan Travelling Fellowship, 2013
   - Awarded Truman Scholarship, 2012
9. Stephanie Sehnert Class of 2014 F/2010, S/2011, S&F/2012
   - Coauthor on publication in *PeerJ*, 2015
10. Caitlyn Le Class of 2015 F/2012, S/2013
11. Ashley Saulsberry Class of 2015 S&F/2013, S&F/14, S&F/15
    - Awarded 2014 Littlejohn Summer Research Scholarship, VUSRP
    - First author on publication in *BMC Evolutionary Biology*, 2017
12. Brad Roche Class of 2016 S/2013
13. Paul Snider Class of 2016 S&F/2014, F/2015, S/2015
14. Minhee Jo Class of 2016 S&F/2013, S/2014
    - Coauthor on publication in *PeerJ*, 2013
15. Jungmin (Danny) On Class of 2016 S/2016
16. Gina Qin Class of 2018 F/2015
17. Ananya Sharma Class of 2019 F/2015, S,F/2016, F/2017, S,F/2018
    - Coauthor on publication in *Current Biology*, 2018
    - Sarnoff Cardiovascular Research Fellow, 2022
18. Katherine Carbonell Class of 2019 S/2016
19. Melissa Halstead Class of 2019 S&F/2016
20. Helen Zhou Class of 2018 S,Su,F/2017, S/2018
    - Coauthor on publication in *PNAS*, 2018
21. Emily Layton Class of 2020 F/2016, S,Su,F/2017, S,Su,F/2018, S,Su/2019, S/2020
    - 2021 National Science Foundation Graduate Research Fellow
    - 2019, First author publication in *mBio*, ASM's flagship journal
    - 2019 SyBBURE Searle Scholar 2019 Best Paper Award, $2500, 1st place among 40 student participants
    - 2019 and 2020 Tennessee Louis Stokes Alliance for Minority Participation awardee

- 2019 Oral Presentation Award, 2nd place,Tennessee Louis Stokes Alliance for Minority Participation Conference
- 2018 and 2017 coauthor on publications in *Nature* and *PNAS*
- 2018 *Wolbachia* Conference Award for Best Poster, 2nd place
- 2018 Tennessee Academy of Science Oral Presentation Award, Microbiology Student Presentation
- 2017-2020 SyBBURE Searle Undergraduate Research Scholar

22. Jane Myers Class of 2020 S,Su,F/2018, S,Su,F/2019
23. Asia Miller Class of 2022 F/2018, S,Su,F/2019-2022
    - SyBBURE Searle Undergraduate Research Scholar, 2018-2022
24. Mahip Kalra Class of 2022 F/2018, S,Su,F/2019-2022
    - SyBBURE Searle Undergraduate Research Scholar, 2020-2022
    - 2020, Coauthor on *PLOS Pathogens* article on cytoplasmic incompatibility
    - SyBBURE Searle Scholar Best Final Research Project, 2nd place, 2020
    - 2022 Undergraduate Research Prize, Vanderbilt University Biological Sciences
25. Rachel Rosenberg Class of 2022 F/2018, S,Su,F/2019
26. Camille Westlake Class of 2021 F/2019
27. Victoria Stewart Class of 2021 S/2020, F,S/2021
28. Christina Valentine Class of 2024 F,S/2021
29. Madi Baltagulov Class of 2024 F,S/2022
    - 2022 Vanderbilt Summer Undergraduate Research Fellow

(ii) Committee member for other student Honors Research at Vanderbilt University

1. Kim, Elliott	2009	Honors Res. Cmte.	PI: K. Friedman
2. Park, Arick	2009	Honors Res. Cmte.	PI: L. Solnica-Krezel
3. Mezzanotte, J.	2010	Honors Res. Cmte.	PI: P. Abbot
4. Thurman, T.	2011	Honors Res. Cmte.	PI: Dan Funk
5. Wittgrove, C.	2012	Honors Res. Cmte.	PI: Jim Patton
6. Brady, J.	2013	Honors Res. Cmte.	PI: Chris Janetopoulos
7. Grasch, J.	2013	Honors Res. Cmte.	PI: Doug McMahon
8. Malpartida, J.	2013	Honors Res. Cmte.	PI: Lawrence Zwiebel
9. McMann, C.	2015	Honors Res. Cmte.	PI: Carl Johnson
10. Lima, S.	2018	Honors Res. Cmte.	PI: Kendal Broadie
10. Sominsky, L.	2019	Honors Res. Cmte.	Dr. Maria Hadjifrangiskou (PI)

(iii) Co-mentor for students in non-Biological Sciences labs at Vanderbilt University

1. Comstock, Jordan	Class of 2014	F/2012	PI: Alyssa Hasty
2. Albert, Shawn	Class of 2016	S&F/2013,2014,2015	PI: Eric Skaar
3. Kator, Jamie	Class of 2016	F&S/2014	PI: Christina Fiske
4. Risemberg, Ellen	Class of 2016	S/2014, F/2015, S/2016	PI: Kathy Gould
5. Li, Anqing	Class of 2018	F/2015, S/2016	PI: Peggy Kendall
6. Bullock, Kennady	Class of 2018	F/2016	PI: Timothy Cover
7. Danielle Cahoon	Class of 2017	F/2016	PI: Fang Yan
8. Lunden Cunningham	Class of 2018	S/2017	PI: Eric Skaar
9. Claire Weinstein	Class of 2019	F2017, S,F2018, S2019	PI: Eric Skaar

10. Marc Bernstein	Class of 2018	F/2017, S/2018	PI: Pierre Massion
11. Jeremy Mani	Class of 2018	F/2017, S/2018	PI: James Crowe
12. Thayer Taft	Class of 2020	F/2017, F/2018	PI: Mark Denison
13. Anica Mohammadkhah	Class of 2021	F/2018	PI: Jane Ferguson
14. Channing Chi	Class of 2021	F/2018	PI: Jeff Rathmell
15. Camille Westlake	Class of 2021	F/2019	PI: Peggy Kendall
16. Rachel Mersfelder	Class of 2021	S/2019, S/2020	PI: Maria Hadjifrangiskou
17. Joon Hee Kim	Class of 2021	F/2019	PI: Jane Ferguson
18. Jessica Casio	Class of 2021	F/2019	PI: Maria Hadjifrangiskou
19. Miranda Shum	Class of 2020	S/2020	PI: Tim Cover
20. Matthew Shou		F/2020	PI: Dean
21. Nandita Dey	Class of 2022	F/2020, S/2021	PI: Wonder Drake
22. Eva Elton		Su/2021	PI: Matthew Evans, Mt. Sanai
23. Thanvi Dola	Class of 2024	F/2021, S/2022	PI: Annet Kirabo

(iv) Faculty Advisor for Vanderbilt Immersion Students:

1. Kalra, Mahip	Class of 2022	Wolbachia symbiont and genetics research
2. Miller, Asia	Class of 2022	Vanderbilt microbiome society and research
3. Shadle, Isabella	Class of 2023	Multimedia, physician and dermatology work
4. Zwemmer, Grace	Class of 2023	Ecology experiment kits for local 5th and 6th graders

Undergraduate research projects supervised at Penn State University

1. David Cirota	Class of 2026 (Honors Student)	F/2023, S,Su/2024
2. Mia Bitman	Class of 2026	F/2024
3. Darlen Lou	Class of 2026	F/2024
4. Caroline Nowicki	Class of 2027	S&F/2025, F 2026
5. Matthew Keller	Class of 2028	S&F/2025
6. Brooklyn Swen	Class of 2028	S&F/2025, F2026
7. Leanne Ulmer	Class of 2025	F/2025

SERVICE (WHILE AT PENN STATE UNIVERSITY)

Service To Departments of Biology and Entomology

i. 2022-2023, Department Head Advisory Board, Department of Entomology, Pennsylvania State University
ii. Professor in Charge, Microbiome Science PhD Dual Title Degree, Department of Entomology
iii. Graduate students for which SRB serves on or chairs the thesis committee

Boville, Elizabeth	2022 –	Dept. of Biology	Penn State
Krozik, Rachel	2022 –	Bioch. & Mol. Biology	Penn State
Huntley, Naomi	2023 –	Dept. of Biology	Penn State

iv. 2023-2024, Development Committee, Department of Entomology, Pennsylvania State University
v. 2023, Evaluation of Associate Professor's Teaching, Dept of Entomology, PSU

vi. 2024, Virtual Graduate Recruitment Presentation on the One Health Microbiome Center
vii. 2024, Seminar on the One Health Microbiome Center to the Deans visiting the Department of Entomology
viii. 2024-2025, Development Committee, Department of Entomology
ix. 2024, Co-advisor and editor for Dept of Biology PhD student F31 application
x. 2024, Member of Ad Hoc Committee on Faculty Search Themes for Department of Entomology
xi. 2024, Qualifying Exam Committee for MCIBS student Hanh Tran (Emily Davenport Lab, Department of Biology)
xii. 2025, Meetings and meals with three faculty candidates
xiii. 2025-2026, Development Committee, Department of Entomology
xiv. 2025, Submitted Two Letters of Award Nominations for Faculty, Department of Biology

Service To College

i. 2023, Science on the Spot Lectures in Washington, D.C. and Philadelphia, Eberly College of Science, Pennsylvania State University
ii. 2023, College Connections Lecture on the One Health Microbiome Center, College Relations, College of Agricultural Sciences, Penn State University
iii. 2024, Contributed half of the National Institute of Antimicrobial Resistance (NIAMRE) membership fee from the One Health Microbiome Center and Huck Institutes of the Life Sciences with the College of Agricultural Sciences. Membership activities are led by Professor of Animal Sciences, Erika Ganda.
iv. 2025, Invited Thought Leader for Dean's Industry Cooperation and Research Translation Strategic Planning, College of Agricultural Sciences
v. 2025, Guest Lecture on Holobiont Biology in PPEM 440 Introduction to Microbiome Analysis, Primary Instructor is Veronica Roman-Reyna, Department of Plant Pathology and Environmental Microbiology, College of Agricultural Sciences.
vi. 2025, Co-advisor and editor for Dept of Biochemistry and Molecular Biology PhD student (Shane Connolly, Bisanz Lab) F31 application
vii. 2025, Submitted Two Letters of Award Nominations for Faculty, Department of Biology
viii. 2025, Reviewer of Eberly College of Science Strategic Plan and Lab Bench to Commercialization Program
ix. 2026, Eberly Development Tour of the One Health Microbiome Center, Penn State, University Park, PA

Service To University

i. 2022-Current, Director of the One Health Microbiome Center, Penn State Uni.
    a. 125 faculty and 550 members in the Center, with an executive management portfolio spanning transinstitutional research, education, community building, marketing, recruitment of faculty and trainees, budgetary responsibility, internal lectures, and external speakers tours.

ii. 2022-Current, Member of the Huck Institutes of Life Sciences Directors Group for Centers and Institutes, a leadership and advisory group
iii. 2022-Current, Faculty Steering Committee of Genomics Core Facility
iv. 2022, Molecular, Cellular, and Integrative Biosciences Graduate Program, Science on the Spot, two short lectures
v. 2023, Lecture on Looking Back to Look Ahead, Huck Institutes of Life Sciences Kitchen Cabinet
vi. 2023, Member of Oral Qualifying Exam Committee for David Romero
vii. 2023 Committee Member, Review of Center for Human Evolution and Diversity Seed Grants
viii. 2023 Committee Member, Faculty Search for Assistant Professor in Pharmacology, Department of Veterinary and Biomedical Sciences, Penn State University
ix. 2023 Committee for development of President's Goal #2 on Growing Interdisciplinary Research Excellence
x. 2023 Lecture for MCIBS graduate program retreat, Toftrees Resort, Penn State
xi. 2023 Invited Seminar on "One Health Microbiome Sciences" to Center for Infectious Disease Dynamics, Penn State University
xii. 2023-Current, Committee for Microbiome Sciences Graduate Degree Faculty
xiii. 2023 Guest Lecture for ANSC 456 Animal Microbiomes (Dr. Erika Ganda's course) on symbiotic speciation
xiv. 2023 Presentation and Attendee for PSU-Geisenger Meeting, Danville, PA
xv. 2024 Presentation with Q&A session for Noontime Knowledge, Researching a Hidden Microbial World with the One Health Microbiome Center, Penn State University Development
xvi. 2024 Reviewer for Penn State Clinical and Translational Science Institute (CTSI) scholar cohort for the TL1 Translational Research Training Program
xvii. 2024 Creative founder of Artist-in-Residence Program between One Health Microbiome Center and Arts and Design Research Incubator; Led to a curated Exhibition at One Health Microbiome Symposium
xviii. 2024 Advisor to Viral Ecology search in Department of Plant Pathology and Environmental Microbiology, College of Agricultural Sciences, Huck Institutes of the Life Sciences, Penn State Univ.
xix. 2024 Committee Member, Faculty Search for Huck Chair in Gut-Brain Axis, Associate or Full Professor, Department of Nutritional Sciences, College of Health and Human Development, Huck Inst. of Life Sciences, Penn State Univ.
xx. 2024 Working Group Member, Interdisciplinary Collaborative Initiative on Artificial Intelligence across campus organizations including but not limited to the Huck Institutes of the Life Sciences, College of Medicine, School of Electrical Engineering and Computer Science, Clinical and Translational Science Institute, Penn State University
xxi. 2024 Advisor to formation of Microbiome Culture Collection by the One Health Microbiome Center
xxii. 2024-2025 Committee Member, Search for Director of the Huck Institutes of the Life Sciences, Penn State University
xxiii. 2024, Grant Studio Review by the One Health Microbiome Center for a NSF grant proposal by Dr. Jennifer Macalady and Roger Ort, Department of Geosciences, Penn State

xxiv. 2024, Co-organizer and Moderator at One Health Microbiome Center Awards Event
xxv. 2025, Co-organizer and speaker at One Health Microbiome Center Winter Networking Event
xxvi. 2025, Committee Member, Review of Center for Human Evolution and Diversity Seed Grants
xxvii. 2025, Keynote Presentation for Penn State University Capital Campaign Leadership Council Meeting - President, Development Office, and Committee Members in attendance, Palm Beach, Florida
xxviii. 2025, Presentation and Working Group Member for Vector-Borne Disease Challenges, Penn State University, SAFES
xxix. Letter writer in support of numerous grants from faculty in the One Health Microbiome Center (e.g., Francisco Dini Andreote, etc)
xxx. 2025, Co-organized and conceived NIH F32 Panel Workshop, Huck Institutes of the Life Sciences. Run by Dr. Emily Van Syoc (F32 Awardee in the lab)
xxxi. 2025, Penn State Office of Principal Gifts Trip to present the One Health Microbiome Center to alumni, Kiawah Island, South Carolina
xxxii. 2025, Authored text for an amicus brief by the Senior Vice President for Research regarding the impact of NIH F&A reductions on microbiome science at Penn State University
xxxiii. 2025, Interview Committee for Associate Vice President of Corporate Engagement Search, Penn State University
xxxiv. 2025, Submitted Three Letters of Award Nominations for Faculty, One Health Microbiome Center
xxxv. 2025, Submitted Four Letters of Support for Faculty applying to the Huck Institutes of the Life Sciences program.
xxxvi. 2025-2026 Committee Member, Faculty Scholarship Review, Penn State University
xxxvii. 2025 Faculty Panelist, "Beyond the Bachelor's: Conversations with Faculty & Grad Students", Penn State University Graduate Women in Science, Minorities in Agriculture, Natural Resources, and Related Sciences, and the Global Engagement Community (GEC)
xxxviii. 2025-2026 Huck Institutes of the Life Sciences Working Group on Entrepreneurship and Corporate Engagement
xxxix. 2026, Course Developer and Guest Instructor for MBIOM 597, Microbiome Sciences: From Origins to Biotechnological Applications
xl. 2026, One Health Microbiome Center Representee, Huck New Life Sciences Faculty Lunch and Networking Event, Penn State, University Park, PA
xli. 2026, NIH T32 BIOMS Training Grant Committee, PhD Applicant Review, Penn State, University Park, PA

SERVICE TO PROFESSION

i. Reviewed manuscripts and thematic proposals for the following journals: Allied Academies, American Naturalist, Animal Behavior, Applied and Environmental Microbiology, Biological Bulletin, bioRxiv, Bioscience, Biotechnic and Histochemistry, BMC Biology, BMC Evolutionary Biology, Carribean Journal of Science, Current Biology, Current Microbiology, DNA and Cell Biology, eLife,

Entomologia Experimentalis et Applicata, Environmental Entomology, Environmental Microbiology, Environmental Microbiology Reports, Evolution, Evolution Medicine and Public Health, Experimental and Applied Acarology, FEMS Microbiology Reviews, Frontiers in Microbiology, Gastroenterology, Genetics, Genetica, Genome Biology and Evolution, Genome Research, Heredity, Insect Biochemistry and Molecular Biology, Insect Molecular Biology, Interface Focus, International Journal of Parasitology, International Society of Microbial Ecology, Journal of Bacteriology, Journal of Evolutionary Biology, Journal of Invertebrate Pathology, Journal of Microbiological Methods, Letters in Applied Microbiology, mBio, Molecular Biology and Evolution, Molecular Ecology, Molecular Genetics and Genomics, Molecular Microbiology, Molecular Phylogenetics and Evolution, Nature Ecology and Evolution, Nature Microbiology, Nature Communications, PeerJ, Philosophical Transactions of the Royal Society, PLOS Biology, PLOS Genetics, PLOS Neglected Tropical Diseases, PLOS Pathogens, Proceedings of the National Academy of Science, Nature Reviews Genetics, Scientific Reports, Symbiosis, Trends in Microbiology, Trends in Biotechnology, Trends in Parasitology

ii. Reviewed national and international grants as either ad hoc reviewer or panel reviewer for the following agencies: National Science Foundation (various panels and divisions below), U.S. Department of Agriculture, Human Frontier Science Program, Netherlands Organization for Scientific Research, Austrian Science Foundation, German Research Foundation - Collaborative Research Centers, onsite evaluation.

Panels:
2015, October 25-28: NSF Symbiosis, Defense and Self-Recognition
2015, July 4-8: German Research Foundation, Collaborative Research Centers
2015, April 22-24: NSF Symbiosis, Defense and Self-Recognition
2012, June 25-28: NSF Dimensions of Biodiversity
2009, October 6-9: NSF Symbiosis, Defense and Self-Recognition
2008, April 15-19: NSF Symbiosis, Defense and Self-Recognition

Ad Hoc (56 total proposals)
2016, September, NSF Division of Integrative Organismal Systems (2 proposals)
2016, March, European Commission (2 proposals)
2015, March, Austrian Science Foundation (1 proposal)
2015, May, NSF Division of Environmental Biology (3 proposals)
2013, June, NSF Division of Environmental Biology (4 proposals)
2013, March, NSF Division of Molecular and Cellular Biosciences (1 proposal)
2012, February, NSF Office of International Science and Engineering (1proposal)
2011, October, NSF Division of Integrative Organismal Systems (1 proposal)
2011, April, NSF Division of Integrative Organismal Systems (3 proposals)
2010, October, NSF Division of Integrative Organismal Systems (4 proposals)
2010, September, NSF Division of Environmental Biology (2 proposals)
2010, March, NSF Division of Integrative Organismal Systems (3 proposals)
2009, August, NSF Division of Molecular and Cellular Biosciences (1 proposal)
2009, February, NSF Division of Integrative Organismal Systems (2 proposals)

2008, September, NSF Division of Integrative Organismal Systems (2 proposals)
2008, April, NSF Division of Emerging Frontiers (1 proposal)
2008, February, NSF Division of Environmental Biology (1 proposal)
2008, January, NSF Division of Molecular and Cellular Biosciences (3 proposals)
2007, December, NSF Div. of Molecular and Cellular Biosciences (3 proposals)
2007, April, NSF Division of Molecular and Cellular Biosciences (3 proposals)
2007, April, NSF Division of Emerging Frontiers (2 proposals)
2007, March, NSF Division of Environmental Biology (1 proposal)
2006, April, NSF Division of Emerging Frontiers (2 proposals)
2006, March: USDA Natl. Res. Initiative Organismal and Pop Bio (3 proposals)
2005, September: NSF Ecology Biology Cluster (1 proposal)
2005, April, NSF Division of Emerging Frontiers (1 proposal)
2005, February: NSF Division of Environmental Biology (1 proposal)
2004, August: Netherlands Organization for Scientific Research (1 proposal)
2004, October: NSF Division of Environmental Biology (1 proposal)

iii. Invited participant for two NSF workshops in 2009 and 2004 and invited speaker for 2012 Dimensions of Biodiversity PI meeting
iv. 2010, Guest associate editor: *PLOS Genetics*
v. Consultant for *Current Biology* Editors on submission covering *Wolbachia* and microbiome sciences
vi. 2013, invited participant for American Academy of Microbiology Colloquium on The Uncharted Viral World
vii. 2013-Current, Informal advisor for microbiome/evolution/symbiosis articles submitted to *Trends in Ecology and Evolution* and *Current Biology*
viii. 2014, Scientific committee member for *Wolbachia* Conference in Innsbruck, Austria
ix. 2015, Invited participant for Computational Advances in Microbiome Research Workshop, National Institute for Mathematical and Biological Synthesis, University of Tennessee, Knoxville, TN
x. 2015-2024, Editor for *mSystems* by American Society for Microbiology (invited by National Academy Member and Senior Editor)
xi. 2015, Convener for session at the American Society for Microbiology General Meeting, Holobionts and Their Hologenomes
xii. 2016-2018, Conference Co-Organizer for 2018 International *Wolbachia* Meeting
xiii. 2017, Abstract Reviewer on "Comparative and evolutionary genomics" for 2017 American Society for Microbiology Microbe General Meeting
xiv. 2017, Convener for plenary session at the American Society for Microbiology Microbe General Meeting, Coevolution of Hosts and Microbiomes
xv. 2018, Assisted Editor/Academy Member with submission to Proceedings of the National Academy of Sciences
xvi. 2019, Invited participant in National Microbiome Centers Meeting, Beckman Center of the National Academy of Sciences, Irvine, CA
xvii. 2019, Mentor to NIH COBRE Center for Integrative Center for Environmental Microbiomes and Human Health at the U. of Hawaii, PIs: Margaret McFall-Ngai and Ned Ruby
xviii. 2020 Organizing Committee, 11th Annual International *Wolbachia* Conference, Crete, Greece

xix. 2020-Current, External Advisory Board for NIH COBRE Center on Integrative Center for Environmental Microbiomes and Human Health at the U. of Hawaii, PIs: Anthony Amend (current) Margaret McFall-Ngai, Ned Ruby (previous)
xx. 2020-Current Advisor Board Member for Hologenomics Training Network, Centre for Evolutionary Hologenomics, GLOBE Institute, University of Copenhagen
xxi. 2022-2025, Member of Organizing Committee for 2023 *Wolbachia* Conference
xxii. 2023, PhD Thesis Committee Member and Reviewer, University of Copenhagen, Denmark
xxiii. 2024, Guest editor for two articles at Proceedings of the National Academy of Sciences
xxiv. 2024, Senior Biologist in 1-week residence for Theory of Microbial Symbiosis Workshop with 12 trainees, Hawaii Institute of Marine Biology, University of Hawaii, Included lectures, model building, group discussions, and publication plans
xxv. Organizing Committee, One Health Microbiome Symposium, 170 attendees, May 29-31, 2024, Pennsylvania State University
xxvi. 2024 Focus Group Panel Member, Foundation for Food and Agriculture Research, Development of a Microbiome and Food System Research Program and Advisory Council
xxvii. 2024-Current, Chair of External Advisory Board for NIH COBRE Center on Integrative Center for Environmental Microbiomes and Human Health at the U. of Hawaii, PIs: Anthony Amend (current) Margaret McFall-Ngai, Ned Ruby (previous)
xxviii. 2025, Guest Editor for *PLOS Genetics* (1 article) and *Proceedings of the National Academy of Sciences* (2 articles)
xxix. 2026, Submitted Nomination Letters for the Crafoord Prize in Bioligical Sciences, the Nobel of Basic Biology

Service To Community:

i. 2005-Current, Scientific Director of international science education program for high school and college students – Discover the Microbes Within! The *Wolbachia* Project
ii. Select websites created and/or maintained by the Bordenstein Laboratory:
1. Discover the Microbes Within! The *Wolbachia* Project (Est. 2007), Discovery-based project on *Wolbachia* symbiosis for precollege and college science education; includes labs, videos, and lectures, and other resources
2. Bioinformatics, An Interactive Introduction to NCBI (Est. 2007), Online educational modules for undergraduate and high school students, Microbial Life Educational Resources,
3. *Wolbachia pipientis*, An Exemplar Species Page for the Encyclopedia of Life (Est. 2008)
4. *Wolbachia*, A Heritable Pandemic (Est. 2008), Online resources to informational websites, news, primary literature, WebQuest, and educational modules
5. Bordenstein Lab website (Est. 2008)
6. Insect Innate Immunity Database (Est. 2011)

7. Vanderbilt Microbiome Innovation Center (Est. 2018), website to coordinate and accelerate microbiome scholarship at Vanderbilt University

iii. Social media outlets used to disseminate research and education
1. @Symbionticism twitter (Est. 2012), professional account
2. @WolbachiaProj twitter (Est. 2018), professional account to disseminate news and activities related to bringing biotechnology and real-world symbiosis research to high school and college classrooms worldwide
3. @VuBiome twitter (Est. 2018), professional account to disseminate announcements, research, and education events to the Vanderbilt microbiome community
4. *Wolbachia* Project Facebook Page (Est. 2011), community page for the international, discovery-based lab series
5. *Nasonia* Research Facebook Page (Est. 2011), community page for disseminating papers, tools, contact information for *Nasonia* research
6. Symbionticism Blog (Est. 2012) – A blog about microbial symbiosis, evolution, and medicine
7. YouTube Channel (Est. 2012), research seminars and video blogs
8. 2015, March 23, People Behind the Science (podcast) - Dr. Bordenstein: Seeing Science and Symbiosis Through the Lens of an Evolutionary Microbiologist.
9. 2015, April 12, This Week in Virology (video and podcast) - Vanderbilt Virology This Week in Virology episode 332.
10. 2023, Matters Microbial Podcast with Mark Martin, How much of you is microbial?
11. @Symbionticism BlueSky (Est. 2024), professional account
12. 2025, Matters Microbial Podcast with Mark Martin

iv. Supervisor for community-engaged project in which the following high school students from the Vanderbilt School of Science and Math were mentored to bring Discover the Microbes Within! The *Wolbachia* Project lab series to their teachers and classrooms in the Metro Nashville Public School System.
2012-2013: Will Cox, Havisha Munjal, Meera Patel, Jacob Seloff, Jonathan Davies (Overton High School)
2013-2014: Qiozhi Guo, Emma Bilbrey and Young-Hun Kim (Overton High School)
2014-2015: Yae Eun Yang, Catherine English and Dheeraj Namburu (Glencliffe High School, Teacher: Mr. Cardwell)
2015-2016: Cyndy Corea, Eduardo Franklin and Vincent Harris (Glencliff High School)

v. High school research projects supervised

Hugus, Pia	2005 – 2006		
Batter, Merry	2006 – 2007	Graduate of Harvard University	
Johnson, Andrew	2007 – 2008	Now undergraduate	University of Virginia
Martin, Rachel	2008 – 2009	Now undergraduate	U. Mass., Amherst
Winters, Jordan	2009 – 2010	HS Student	School of Sci & Math
Jin, Hyunjeong	2009 – 2010	HS Student	School of Sci & Math
Mwenya, Kanyanta	2009 – 2010	HS Student	School of Sci & Math
Cela, Ronnie	2009 – 2011	HS Student	School of Sci & Math
Kiev, Maya	2017 – 2018	HS Student	Hillsboro High Sch.

vi. 2011, June 14-17, Host of International *Nasonia* Conference, Vanderbilt, 35 participants
vii. 2013, participant in Woodrow Wilson Career Enhancement Fellowship Retreat on behalf of fellow Dr. Irene Newton from Indiana University
viii. 2013, October 16, Host to Brentwood High School student for her Career Shadow Day
ix. 2014, June 6-11, Scientific selection committee for International *Wolbachia* Conference, Innsbruck, Austria
x. 2014, January, Speaker at Brentwood High School, TN on outreach project Discover the Microbes Within! The *Wolbachia* Project
xi. 2014, November 12, Q&A session on Google+ Hangout with freshman from the Univ. of Puget Sound, Dr. Martin
xiv. 2015, September 10, *Science* podcast interview
xv. 2016, Visit to Hillsboro High School to teach students about *Wolbachia* symbionts in their Interdisciplinary Science and Research (ISR) program
xvi. 2017, Host lab for Day of Discovery which immerses middle school students in a research-based STEM curriculum
xxx. 2017, 15 minute lecture to Vanderbilt School for Science and Math on human gut microbiome research
xxxi. 2018, Supervisor for community-engaged project in which Metro Nashville high school students from the Vanderbilt School of Science and Math were mentored to develop a web-based application for Vanderbilt's first clinical microbiome study
xxxii. 2019 Nashville Science Club, Teddy Van Opstal, The Microbiome and Comedy, Jackalope Brewery, Nashville, TN
xxxiii. 2019 Co-Host (VMI and MI4) and Featured Faculty Participant, Discussion with Nashville Community at Tennessee Brew Works, Gut Microbes and Health, Nashville, TN
xxxiv. 2019 Invited Professor, Q&A with Biology 376 – One: Our Symbiotic Planet, University of Puget Sound, Instructor: Dr. Mark Martin, 13 students
xxxv. 2019 Seminar and Lab Host for Hillsboro High School Sophomores
xxxvi. 2019 National Microbiome Centers Consortium, Mission and Social Media Committees
xxxvii. 2023 Steering Committee Member of NSF Research Coordination Network for the Microbiome Centers Consortium (80+ national microbiome unites)
xxxviii. 2023 Co-organized free film screening of Invisible Extinction and expert panel discussion at the State Theatre, State College, PA
xxxix. 2024-Current, Collaborator for The Microbiota Vault, a global non-profit initiative to conserve microorganisms for long-term health
xl. 2024-Current, Advisor and co-mentor with Gloria Dominguez-Bellow (PI, Rutgers University) to Dr. Alexander Kwarteng (Kwame Nkrumah University of Science and Technology, Ghana) for the NIH K43 Emerging Global Leader Award by the NIH Fogarty International Center
xli. 2025, Letter writer for promotion to full professor, U. Chicago
xlii. 2025, Q&A recording on One Health Microbiome Sciences for dissemination with industry partner, Institut Merieux, France

xliii. 2025-Current, Vice Chair for Host-Associated Microorganisms, Steering Committee, IUCN Species Survival Commission - Microbial Conservation Specialist Group

xliv. 2026-Current, Co-Director of Communications, Policy, and Outreach for IUCN Microbial Conservation Specialist Group